# LIGHTING FIXTURE SCHEDULE

| TYPE | DESCRIPTION | FINISH | LAMP(S) | REMARKS | MANUFACTURER & NO. |
|---|---|---|---|---|---|
| A / 71 | 2'x4', 3 LAMP RECESSED, FLUORESENT TROFFER WITH PATTERN 12 PRISMATIC ACRYLIC LENS AND HINGE & SPRING-LOADED LATCH DOOR FRAME. 120V | BAKED WHITE ENAMEL | (3) FO32T8 XPS | SYLVANIA- XTREME LAMP & BALLAST SYSTEM | PRUDENTIAL #P-8624-3T8-PRA-RW-W-DC-120-X1 OR EQUAL BY COLUMBIA |
| A1 / 71 | 2'x4', 3 LAMP SURFACE, FLUORESENT FIXTURE WITH WRAP AROUND PATTERN 12 PRISMATIC ACRYLIC LENS. 120V | BAKED WHITE ENAMEL | (3) FO32T8 XPS | SYLVANIA- XTREME LAMP & BALLAST SYSTEM | PRUDENTIAL P1804-3T804-PRA-YGW-SC-120-SUR OR EQUAL BY COLUMBIA |
| B / 56 | 8" COMPACT FLUORESCENT DOWNLIGHT WITH CLEAR ALZAK CONE AND ACRYLIC LENS. 120V | ALZAK WITH WHITE TRIM | (2) 26W PL | | CAPRI #CF82H26Q-U-FS2-T462L OR EQUAL BY EDISON PRICE |
| C / 5 | EMERGENCY EXIT LIGHT, LED TYPE, RED LETTERS, SINGLE FACE, WALL, CEILING OR END MOUNT, WITH DIRECTIONAL ARROWS AS SHOWN. 120V. | BRUSHED ALUM. FACE & BLACK BACKGROUND | LED | TYPE "C" VERIFY MOUNTING CONFIGURATIONAND ARROWS PRIOR TO ORDERING FIXTURES. | EVENLITE #RZR-AC-R-1-S-B-*-*-PC1-120 |

## CERTIFICATE OF COMPLIANCE (Part 1 of 2) LTG-1

| | | | |
|---|---|---|---|
| PROJECT NAME: RAMONA ALESSANDRO ELEMENTARY SCHOOL | | | DATE: 12/17/07 |
| PROJECT ADDRESS: SAN BERNARDINO, CA | | | Building Permit # |
| PRINCIPAL DESIGNER-LIGHTING: JOE ROGOWICZ | | TELEPHONE: 909.983.8822 | |
| DOCUMENTATION AUTHOR: JOE ROGOWICZ | | TELEPHONE: 909.983.8822 | Checked by/Date Enforcement Agency Use |

### GENERAL INFORMATION

| | | | |
|---|---|---|---|
| DATE OF PLANS 12/17/07 | BUILDING CONDITIONED FLOOR AREA 48053 | | CLIMATE ZONE |
| BUILDING TYPE | [X] NONRESIDENTIAL | [ ] HIGH RISE RESIDENTIAL | [ ] HOTEL/MOTEL GUEST ROOM |
| PHASE OF CONSTRUCTION | [X] NEW CONSTRUCTION | [ ] ADDITION [ ] ALTERATION | [ ] UNCONDITIONED(file affidavit) |
| METHOD OF LIGHTING COMPLIANCE | [X] COMPLETE BLDG. | [ ] AREA CATEGORY [ ] TAILORED | [ ] PERFORMANCE |

### STATEMENT OF COMPLIANCE

This Certificate of Compliance lists the building features and performance specifications need 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 hereby certifies that the documentation is accurate and complete.

| DOCUMENTATION AUTHOR | SIGNATURE | DATE |
|---|---|---|
| JOE ROGOWICZ | | 12/17/07 |

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, and 149 of Title 24, Part 6.

Please check one:

[X] 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 licensed architect.

[ ] 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 Professions 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. # |
|---|---|---|---|
| JOE ROGOWICZ | | 12/17/07 | E-11795 |

### LIGHTING MANDATORY MEASURES

Indicate location on plans of Note Block for Mandatory Measures: THIS SHEET

### INSTRUCTIONS TO APPLICANT

*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.*
*LTG-1: Required on plans for all submittals. Part 2 and 3 may be incorporated in schedules on plans.*
*LTG-2: Required for all submittals.*
*LTG-3: Optional. Use only if lighting control credits are taken.*
*LTG-4/LTG-5: Optional. Use only if Tailored Method is used.*

*Nonresidential Compliance Forms* August 2001

## LIGHTING COMPLIANCE SUMMARY LTG-2

PROJECT NAME: RAMONA ALESSANDRO ELEMENTARY SCHOOL DATE: 12/17/07

### ACTUAL LIGHTING POWER

| LUMINAIRE NAME | DESCRIPTION | NUMBER OF LUMINAIRES | WATTS PER LUMINAIRE (Including Ballast) | CEC DEFAULT? Y | N | TOTAL WATTS |
|---|---|---|---|---|---|---|
| A, A1 | SEE SCHEDULE | 215 | 71 | [X] | [ ] | 15265 |
| | | | | [X] | [ ] | - |
| | | | | [X] | [ ] | - |
| | | | | [X] | [ ] | - |
| | | | | [X] | [ ] | - |
| | | | | [X] | [ ] | - |
| | | | | [X] | [ ] | - |
| | | | | [X] | [ ] | - |
| | | | | [X] | [ ] | - |

If not using the CEC Default value, please provide supporting documentation.

| | |
|---|---|
| SUBTOTAL FROM THIS PAGE | 15265 |
| PLUS SUBTOTAL FROM CONTINUATION PAGE | - |
| PORTABLE LIGHTING (FROM PART 3 OF 3) | NA |
| LESS CONTROL CREDIT WATTS (From LTG-3) | - |
| ADJUSTED ACTUAL WATTS | 15265 |

### ALLOWED LIGHTING POWER (Choose One Method)

#### COMPLETE BUILDING METHOD

| BUILDING CATEGORY (From § 146(b) Table 1-M) | WATTS PER SF | COMPLETE BLDG. AREA | ALLOWED WATTS |
|---|---|---|---|
| EDUCATION | 1.4 | 15,818 | 22,145.2 |

#### AREA CATEGORY METHOD

| AREA CATEGORY (From § 146(b) Table 1-N) | WATTS PER SF | AREA (SF) | ALLOWED WATTS |
|---|---|---|---|
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| | TOTALS | - AREA | - WATTS |

#### TAILORED METHOD

TOTAL ALLOWED WATTS (From LTG-4, or from Computer Run): -

*Nonresidential Compliance Form* *August 2001*

# LIGHTING FIXTURE NOTES

1. ALL EXPOSED FLUORESCENT LAMPS SHALL BE EQUIPPED WITH THERMOPLASTIC SAFETY SLEEVES WITH LOCKING CAPS, EQUAL TO ARM-A-LITE.
2. EXIT SIGNS WITH THROUGH WIRING SHALL BE EQUIPPED WITH A SEPARATE JUNCTION BOX FOR TERMINATION OF CONDUITS. FURNISH A SEPARATE BOX FOR EACH CIRCUIT.
3. CONTRACTOR SHALL VERIFY ALL MOUNTING REQUIREMENTS FOR ALL RECESSED LIGHTING FIXTURES, PRIOR TO SHOP DRAWINGS SUBMITTALS. IT IS THE CONTRACTOR'S RESPONSIBLITY TO SECURE THE MOUNTING HARDWARE THAT IS COMPATIBLE WITH THE CEILING AND THE CONFIGURATION OF THE LIGHTING LAYOUT.
4. FOR LIGHTING FIXTURE VOLTAGE RATINGS, THE CONTRACTOR IS RESPONSIBLE TO VERIFY FIXTURE AND BALLAST VOLTAGES WITH BRANCH CIRCUIT WIRING.
5. LAMP COLOR FOR FLUORESCENT FIXTURES SHALL BE 4100°K U.N.O.
6. CONTRACTOR SHALL VERIFY THE NUMBER OF BALLASTS IN A FLUORESCENT LIGHTING FIXTURE WITH THE SWITCHING REQUIREMENTS ON THE FLOOR PLANS.
7. LENSES , OF ALL FLUORESCENT LIGHTING FIXTURES SHALL NOT BE LESS THAN 0.125" MINIMAL THICK, EQUAL TO KSH-K12 WHERE APPLICABLE.
8. FOR FIXTURES RECESSED INTO NON-COMBUSTIBLE CEILINGS, PROVIDE YOKE MOUNTED OUTLET BOXES, ACCESSIBLE FROM INSIDE FIXTURE.
9. PROVIDE FIRE RATED ENCLOSURE AROUND RECESSED FIXTURES IN FIRE RATED CEILINGS.
10. FIXTURES SHALL BE U.L. LISTED FOR INTENDED LOCATION.
11. FINISH OF FIXTURES SHALL BE AS SELECTED BY ARCHITECT.
12. ALL FLUORESCENT BALLASTS SHALL BE ELECTRONIC PROGRAM START AS MANUFACTURED BY SYLVANIA INC. BALLAST %THD SHALL BE LESS THAN10%.
13. LIGHTING FIXTURES IN MECHANICAL SPACES ARE SHOWN IN THEIR APPROXIMATE LOCATION ONLY. DO NOT INSTALL LIGHT OUTLETS FOR FIXTURES UNTIL MECHANICAL PIPING AND DUCTWORK ARE INSTALLED; THEN LIGHTING FIXTURES SHALL BE INSTALLED IN LOCATIONS BEST SUITED FOR EQUIPMENT ARRANGEMENT AND AS APPROVED BY THE THE PROJECT MANAGER. VERIFY LOCATIONS OF FIXTURES IN ELEVATOR MACHINE ROOMS BEFORE INSTALLATION.
14. LIGHT FIXTURE SUPPORT:

SUSPENDED ACOUSTICAL CEILINGS:

HEAVY DUTY GRID SYSTEM: FLUSH OR RECESSED LIGHT FIXTURES WEIGHING LESS THAN 56 POUNDS MAY BE SUPPORTED DIRECTLY ON THE RUNNERS OF A HEAVY DUTY GRID SYSTEM. IN ADDITION, THEY SHALL HAVE A MINIMUM OF TWO 12 GAUGE SLACK SAFETY WIRES ATTACHED TO THE FIXTURE AT DIAGONAL CORNERS AND ANCHORED TO THE STRUCTURE ABOVE. ALL 4 FOOT BY 4 FOOT LIGHT FIXTURES SHALL HAVE SLACK SAFETY WIRES AT EACH CORNER.
ALL FLUSH OR RECESSED LIGHT FIXTURES WEIGHING 56 POUNDS OR MORE SHALL BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR TAUT 12 GAUGE WIRES EACH ATTACHED TO THE FIXTURE AND TO THE STRUCTURE ABOVE REGARDLESS OF THE TYPE OF CEILING GRID SYSTEM USED. THE FOUR TAUT 12 GAUGES WIRES INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE SHALL BE CAPABLE OF SUPPORTING FOUR TIMES THE WEIGHT OF THE UNIT.

INTERMEDIATE DUTY GRID SYSTEM: ALL FIXTURES SUPPORTED ON INTERMEDIATE DUTY GRID SYSTEMS SHALL BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR TAUT 12 GAUGE WIRES EACH ATTACHED TO THE FIXTURE AND TO THE STRUCTURE ABOVE.

SURFACE MOUNTED FIXTURES: SUPPORT SURFACE MOUNTED LIGHT FIXTURES BY AT LEAST TWO POSITIVE DEVICES WHICH SURROUND THE CEILING RUNNER AND WHICH ARE EACH SUPPORTED FROM THE STRUCTURE ABOVE BY A 12 GAUGE WIRE. SPRING CLIPS OR CLAMPS THAT CONNECT ONLY TO THE RUNNER ARE NOT ACCEPTABLE. PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE EIGHT FEET OR LONGER.

SUSPENSION SYSTEMS FOR LIGHT FIXTURES WHICH HAVE PASSED SHAKING TABLE TESTS APPROVED THE ENFORCEMENT AGENCY, OR WHICH, AS INSTALLED, ARE FREE TO SWING A MINIMUM OF 45 DEGREES FROM THE VERTICAL IN ALL DIRECTIONS WITHOUT CONTACTING OBSTRUCTIONS, SHALL BE ASSUMED TO COMPLY WITH THE LATERAL-FORCE REQUIREMENTS OF SECTION 1630A.2. UNLESS THE CABLE TYPE, FREE-SWINGING SUSPENSION SYSTEMS SHALL HAVE A SAFETY WIRE OR CABLE ATTACHED TO THE FIXTURE AND STRUCTURE AT EACH SUPPORT CAPABLE OF SUPPORTING FOUR TIMES THE SUPPORTED LOAD.

SUSPENDED DRYWALL CEILINGS:

ALL RECESSED OR DROP-IN LIGHT FIXTURES SHALL BE SUPPORTED DIRECTLY BY MAIN RUNNERS OR BY SUPPLEMENTAL FRAMING WHICH IS SUPPORTED BY MAIN RUNNERS. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE CEILING CONTRACTOR TO PROVIDE APPROPRIATE FRAMING AND LOCATION FOR FIXTURES.

SURFACE MOUNTED FIXTURES SHALL BE ATTACHED TO A MAIN RUNNER WITH A POSITIVE CLAMPING DEVICE MADE OF MATERIAL WITH A MINIMUM OF 14 GAUGE. ROTATIONAL SPRING CATCHES SHALL NOT BE ALLOWED.

## California Energy Commission Mandatory Measures

**Building Lighting Shut-Off**
The building lighting shut-off system consists of an automatic time switch, with a zone for each floor.

**Override for Building Shut-Off**
The automatic building shut-off system is provided with manual, accessible override switch in sight of the lights. The area override is not to exceed 5,000 square feet.

**Automatic Control Devices Certified**
All automatic control devices specified are certified, all alternate equipment shall be certified and installed as directed by the manufacturer.

**Fluorescent Ballast and Luminaires Certified**
All Fluorescent fixtures and ballast specified for this project are certified and listed in the Directory. All installed fixtures and/or ballast shall be certified.

**Tandem Wiring to Two-Lamp Ballasts**
All one and three lamp fluorescent fixtures are specified with electronic high-frequency ballasts and are exempt from the two lamp tandem wiring requirements.

**Individual Room/Area Controls**
Each room and area in this building is equipped with a separate switch or occupant sensor device for each area with floor to ceiling walls.

**Uniform Reduction or Individual Rooms**
All rooms and areas greater than 100 square feet and more than 1.2 watts per square foot of lighting load shall be controlled with bi-level switching for uniform reduction of lighting within the room.

**Daylit Area Control**
All rooms with windows and/or skylights, that are greater than 250 square feet, and that allow for the effective use of daylight in the area shall have 50% of the lamps in each daylit area controlled by a separate switch.

**Control of Exterior Lights**
Exterior mounted fixtures are controlled by a directional photo cell control on the roof and a corresponding relay in the lighting control panel.


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Consulting Mechanical and Electrical Engineers
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Ontario, Ca. 91762
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Fax 909.988.2220


KEY PLAN

AGENCY APPROVAL

IDENTIFCATION STAMP
DIV. OF THE STATE ARCHITECT
04-106133
AC — FLS [signature] SS [signature]
DATE DEC 2 8 2007

PROJECT TITLE
SAN BERNARDINO CITY UNIFIED SCHOOL DISTRICT
777 NORTH "F" STREET
SAN BERNARDINO,CA. 92410

RAMONA-ALESSANDRO ELEMENTARY SCHOOL
MODERNIZATION
670 RAMONA AVENUE
SAN BERNARDINO, CA 92411

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| NO. | REVISIONS | DATE | NO. | REVISIONS | DATE |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

DRAWING TITLE
# LIGHTING FIXTURE SCHEDULE

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

| | |
|---|---|
| DESIGNED: BM | PROJECT NO.: 31137117-000 |
| DRAWN: RL | SCALE: NO SCALE |
| CHECKED: JJR | DRAWING NO.: E-0.3 |
| DATE: | |

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