



Office of the City Manager

INFORMATION CALENDAR

June 25, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Timothy Burroughs, Director, Planning and Development

Subject: LPO NOD: 2140 Shattuck Avenue, #LMSAP2018-0004

INTRODUCTION

The attached Landmarks Preservation Commission Notice of Decision (NOD) is presented to the Mayor and City Council pursuant to Berkeley Municipal Code/Landmarks Preservation Ordinance (BMC/LPO) Section 3.24.240.A, which requires that “a copy of the Notice of Decision shall be filed with the City Clerk, and the City Clerk shall present said copy to the City Council at its next regular meeting.”

CURRENT SITUATION AND ITS EFFECTS

The Landmark Preservation Commission (LPC/Commission) has approved a Structural Alteration Permit (SAP) for the subject City Landmark property. This action is subject to a 15-day appeal period, which began on June 17, 2019.

BACKGROUND

BMC/LPO Section 3.24.300 allows City Council to review any action of the Landmarks Preservation Commission in granting or denying a Structural Alteration Permit. In order for Council to review the decision on its merits, Council must appeal the Notice of Decision. To do so, a Council member must move this Information Item to Action and then move to set the matter for hearing on its own. Such action must be taken within 15 days of the mailing of the Notice of Decision, or by June 25, 2019. Such certification to Council shall stay all proceedings in the same manner as the filing of an appeal.

If the Council chooses to appeal the action of the Commission, then a public hearing will be set. The Council must rule on the application within 30 days of closing the hearing, otherwise the decision of the Commission is automatically deemed affirmed.

Unless the Council wishes to review the determination of the Commission and make its own decision, the attached NOD is deemed received and filed.

ENVIRONMENTAL SUSTAINABILITY

Landmark designation provides opportunities for the adaptive re-use and rehabilitation of historic resources within the City. The rehabilitation of these resources, rather than their removal, achieves construction and demolition waste diversion, and promotes investment in existing urban centers.

POSSIBLE FUTURE ACTION

The Council may choose to appeal the decision, in which case it would conduct a public hearing at a future date.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

There are no known fiscal impacts associated with this action.

CONTACT PERSON

Fatema Crane, Landmarks Preservation Commission Secretary, Planning and Development, 510-981-7410

Attachments:

1: Notice of Decision – #LMSAP2018-004, 2140 Shattuck Avenue



L A N D M A R K S  
P R E S E R V A T I O N  
C O M M I S S I O N

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N O T I C E O F D E C I S I O N

**DATE OF BOARD DECISION: May 2, 2019**  
**DATE NOTICE MAILED: June 10, 2019**  
**APPEAL PERIOD EXPIRATION: June 25, 2019**  
**EFFECTIVE DATE OF PERMIT (Barring Appeal or Certification): June 26, 2019<sup>1</sup>**

## **2140 Shattuck Avenue**

### **The Chamber of Commerce/Wells Fargo Building**

**Structural Alteration Permit application #LMSAP2018-0004 to install and to operate an exterior lighting program on a City Landmark building in Downtown.**

The Landmarks Preservation Commission of the City of Berkeley, after conducting a public hearing, **APPROVED** the Structural Alteration Permit for this project.

**APPLICANT:** Maelisa Reed, Maelight, 121 Broadway, #526, San Diego, CA 92101

**ZONING DISTRICT:** Commercial Downtown/Mixed Use (C-D/MU)

**ENVIRONMENTAL REVIEW STATUS:** Projects that are found to be consist with the Secretary of the Interior Standards for the Treatment of Historic Properties may be exempt from environmental review under CEQA Guidelines Section 15331.

**The Application materials for this project are available online at:**  
<http://www.cityofberkeley.info/zoningapplications>

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<sup>1</sup> Pursuant to BMC Section 1.04.070, if the close of the appeal period falls on a weekend or holiday, then the appeal period expires the following business day. Pursuant to BMC Section 3.24.190, the City Council may “certify” any decision of the LPC for review, within fifteen days from the mailing of the NOD. Such certification shall stay all proceedings in the same manner as the filing of a notice of appeal.

LANDMARKS PRESERVATION COMMISSION  
NOTICE OF DECISION  
LMSAP2018-0004  
2140 Shattuck Avenue  
April 8, 2019  
Page 2 of 4

**FINDINGS, CONDITIONS AND APPROVED PLANS ARE ATTACHED TO THIS NOTICE**

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**COMMISSION VOTE: 6-0-0-2 (one vacancy)**

**YES:** ABRACHAS DA SILVA, ADAMS, ALLEN, CHAGNON, FINACOM, SCHWARTZ

**NO:** NONE

**ABSTAIN:** NONE

**ABSENT:** CRANDALL, O'MALLEY

**TO APPEAL THIS DECISION (see Section 3.24.300 of the Berkeley Municipal Code):**

To appeal a decision of the Landmarks Preservation Commission to the City Council you must:

1. Submit a letter clearly and concisely setting forth the grounds for the appeal to the City Clerk, located at 2180 Milvia Street, 1<sup>st</sup> Floor, Berkeley; or by facsimile to (510) 981-6901. The City Clerk's telephone number is (510) 981-6900.
2. The appeal must be received prior to 5:00 p.m. on the "APPEAL PERIOD EXPIRATION" date shown above (if the close of the appeal period falls on a weekend or holiday, then the appeal period expires the following business day).
3. Submit the required fee (checks and money orders must be payable to 'City of Berkeley'):
  - a. The basic fee for persons other than the applicant is \$500. This fee may be reduced to \$100 if the appeal is signed by persons who lease or own at least 50 percent of the parcels or dwelling units within 300 feet of the project site, or at least 25 such persons (not including dependent children), whichever is less.
  - b. The fee for appeals of affordable housing projects (defined as projects which provide 50 percent or more affordable units for households earning 80% or less of Area Median Income) is \$500, which may not be reduced.
  - c. The fee for all appeals by Applicants is \$2500.

**STRUCTURAL ALTERATION PERMIT ISSUANCE:**

If no appeal is received, the Structural Alteration permit will be issued on the first business day following expiration of the appeal period, and the project may proceed at that time. Information about the Building Permit process can be found at the following link:

<http://www.ci.berkeley.ca.us/permitservicecenter/>.



LANDMARKS PRESERVATION COMMISSION  
NOTICE OF DECISION  
LMSAP2018-0004  
2140 Shattuck Avenue  
April 8, 2019  
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**NOTICE CONCERNING YOUR LEGAL RIGHTS:**

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If you object to this decision, the following requirements and restrictions apply:

1. If you challenge this decision in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the Landmarks Preservation Commission at, or prior to, the public hearing.
2. You must appeal to the City Council within fifteen (15) days after the Notice of Decision of the action of the Landmarks Preservation Commission is mailed. It is your obligation to notify the Land Use Planning Division in writing of your desire to receive a Notice of Decision when it is completed.
3. Pursuant to Code of Civil Procedure Section 1094.6(b) and Government Code Section 65009(c)(1), no lawsuit challenging a City Council decision, as defined by Code of Civil Procedure Section 1094.6(e), regarding a use permit, variance or other permit may be filed more than ninety (90) days after the date the decision becomes final, as defined in Code of Civil Procedure Section 1094.6(b). Any lawsuit not filed within that ninety (90) day period will be barred.
4. Pursuant to Government Code Section 66020(d)(1), notice is hereby given to the applicant that the 90-day protest period for any fees, dedications, reservations, or other exactions included in any permit approval begins upon final action by the City, and that any challenge must be filed within this 90-day period.
5. If you believe that this decision or any condition attached to it denies you any reasonable economic use of the subject property, was not sufficiently related to a legitimate public purpose, was not sufficiently proportional to any impact of the project, or for any other reason constitutes a "taking" of property for public use without just compensation under the California or United States Constitutions, your appeal of this decision must include the following information:
  - A. That this belief is a basis of your appeal.
  - B. Why you believe that the decision or condition constitutes a "taking" of property as set forth above.
  - C. All evidence and argument in support of your belief that the decision or condition constitutes a "taking" as set forth above.

If you do not do so, you will waive any legal right to claim that your property has been taken, both before the City Council and in court.

LANDMARKS PRESERVATION COMMISSION  
NOTICE OF DECISION  
LMSAP2018-0004  
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**PUBLIC COMMENT:**

Communications to Berkeley boards, commissions or committees are public record and will become part of the City's electronic records, which are accessible through the City's website. **Please note: e-mail addresses, names, addresses, and other contact information are not required, but if included in any communication to a City board, commission or committee, will become part of the public record.** If you do not want your e-mail address or any other contact information to be made public, you may deliver communications via U.S. Postal Service or in person to the secretary of the relevant board, commission or committee. If you do not want your contact information included in the public record, please do not include that information in your communication. Please contact the secretary to the relevant board, commission or committee for further information.

**FURTHER INFORMATION:**

Questions about the project should be directed to the project planner, Fatema Crane, at (510) 981-7410 or [fcrane@cityofberkeley.info](mailto:fcrane@cityofberkeley.info). All project application materials, including full-size plans, may be viewed at the Permit Service Center (Zoning counter), 2120 Milvia Street, between 8 a.m. and 4 p.m., Monday through Friday.

**ATTACHMENTS:**

1. Approved Findings and Conditions
2. Project Plans, received **MARCH 18, 2019**

ATTEST:   
Fatema Crane, Secretary  
Landmarks Preservation Commission

cc: City Clerk  
Applicant: Maelisa Reed  
Maelight  
121 Broadway, #526  
San Diego, CA 92101  
  
Owner: Bollibokka Shattuck LLC  
Pacific West Asset Management  
P.O. Box 19068  
Irvine, CA 92623

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FINDINGS AND CONDITIONS

## 2140 Shattuck Avenue

### The Chamber of Commerce/Wells Fargo Building

#### Structural Alteration Permit #LMSAP2018-0004

To install and to operate an exterior lighting system on a City Landmark building in Downtown.

#### CEQA FINDINGS

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1. The project is categorically exempt from the provisions of the California Environmental Quality Act (CEQA, Public Resources Code §21000, et seq. and California Code of Regulations, §15000, et seq.) pursuant to Section 15331 of the CEQA Guidelines (“Historic Resource Restoration/Rehabilitation”) if it adheres to the Secretary of the Interior’s Standards for the Treatment of Historic Properties. Furthermore, none of the exceptions in CEQA Guidelines Section 15300.2 apply, as follows: (a) the site is not located in an environmentally sensitive area, (b) there are no cumulative impacts, (c) the project is not a significant effect, (d) the project is a state or local government project, (e) the project is a state or local government project, Code Section 65962.5, and (f) the project will not cause a substantial adverse change to the significance of a historical resource.

#### SECRETARY OF THE INTERIOR’S STANDARDS FINDINGS

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Regarding the Secretary of the Interior’s Standards for Rehabilitation, the Landmarks Preservation Commission of the City of Berkeley makes the following findings:

1. The historic bank, office and commercial use of the subject building will continue and is not proposed to change with this alteration permit request for an exterior lighting program.
2. The historic character of the Chamber of Commerce building will be retained and preserved with the proposed installation of an exterior lighting program. The distinctive materials of the building would not be removed, and there would be no alteration of the building’s spaces.
3. The building will continue to be recognized as a physical record of Berkeley’s early period of commercial growth in the Downtown. The proposed installation of light fixtures would not create a false sense of historical development because the fixtures are distinctly contemporary in their design and materials, and not similar to fixtures from the building’s historic period.

4. There are no known changes to this property that have acquired historic significance in their own right and, therefore, this standard would not apply to this property or alteration proposal.
5. The proposed lighting installation project does not include a proposal to repair any existing deteriorated features of the subject building. This standard does not apply to this project.
6. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible as a condition of this permit, though none are anticipated with this project.
7. Any archeological resources at this site will be unaffected by the proposed work which includes no excavation.
8. The proposed installation of light fixtures could be undertaken such that, if the fixtures were removed in the future, the essential, overall form and integrity of the 12-story Chamber of Commerce building would be unimpaired.

#### **ZONING ORDINANCE DESIGN REVIEW FINDINGS**

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In accordance with Berkeley Municipal Code Sections 23E.08.020 (*Design Review Standards*) and 23E.08.040 (*Design Review Applicability*), the Commission finds that the proposed project is permissible.

#### **LANDMARK PRESERVATION ORDINANCE FINDINGS**

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As required by Section 3.24.260 of the Landmarks Preservation Ordinance, the Commission finds that proposed work is appropriate for and consistent with the purposes of the Ordinance, and will preserve and enhance the characteristics and features specified in the designation for this property.

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**STANDARD CONDITIONS**

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The following conditions, as well as all other applicable provisions of the Landmarks Preservation Ordinance, apply to this Permit:

**1. Conditions Shall be Printed on Plans**

The conditions of this Permit shall be printed on the *second* sheet of each plan set submitted for a building permit pursuant to this Permit, under the title 'Structural Alteration Permit Conditions'. *Additional sheets* may also be used if the *second* sheet is not of sufficient size to list all of the conditions. The sheet(s) containing the conditions shall be of the same size as those sheets containing the construction drawings; 8-1/2" by 11" sheets are not acceptable.

**2. Plans and Representations Become Conditions**

Except as specified herein, the site plan, floor plans, building elevations and/or any additional information or representations, whether oral or written, indicating the proposed structure or manner of operation submitted with an application or during the approval process are deemed conditions of approval.

**3. Subject to All Applicable Laws and Regulations**

The approved use and/or construction is subject to, and shall comply with, all applicable City Ordinances and laws and regulations of other governmental agencies. Prior to construction, the applicant shall identify and secure all applicable permits from the Zoning Adjustments Board or Zoning Officer, Building and Safety Division, Public Works Department and other affected City divisions and departments.

**4. Exercise and Lapse of Permits (Section 23B.56.100)**

- B. A permit for the construction of a building or structure is deemed exercised when a valid City building permit, if required, is issued, and construction has lawfully commenced.
- A. A permit may be declared lapsed and of no further force and effect if it is not exercised within one year of its issuance, except that permits for construction or alteration of structures or buildings may not be declared lapsed if the permittee has:
  - (1) applied for a building permit; or, (2) made substantial good faith efforts to obtain a building permit and begin construction, even if a building permit has not been issued and/or construction has not begun.

**5. Indemnification Agreement**

The applicant shall hold the City of Berkeley and its officers harmless in the event of any legal action related to the granting of this Permit, shall cooperate with the City in defense of such action, and shall indemnify the City for any award of damages or attorneys fees that may result.

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### **ADDITIONAL CONDITIONS**

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The following additional conditions are attached to this Permit:

6. **Chemical Treatments.** Any chemical treatments needed as installation progresses or as lighting fixtures are removed shall be undertaken using the gentlest means possible.
7. **Repair and maintenance.** Fixtures shall be maintained in good condition and repaired as needed to remain like new condition. All work to remove or replace fixtures in the future shall be undertaken with expert care to protect, preserve and/or restore the building's historic features, character and finishes as recommended by the National Park Service.
8. **Lighting.** Prior to staff sign-off of the building permit set of drawings, the applicant shall submit lighting details showing all existing and proposed site and building lighting. All exterior lighting shall be shielded and directed away from property lines to prevent excessive glare beyond the subject property.
9. **Colors.** Prior to staff sign-off of the building permit set of drawings, the applicant shall submit color and materials information (including lighting color) for review and approval by staff.
10. **Energy Efficient Lighting.** At all times, all lighting shall be energy efficient and shall adhere to or exceed the standards of Title 24 of the California Building Code.
11. **Hours of Non-Operation.** The subject lighting program shall be turned off between the hours of midnight and sunrise.
12. **Performance Review and Mandatory Adjustments.** All exterior building lighting shall be installed with a dimmer. There shall be a six-month review period after installation for staff to determine whether there should be adjustments to the lighting levels, and the property owner shall make adjustments accordingly. The applicant shall notify staff once the lighting is installed.

# Maelisa Reed Lighting

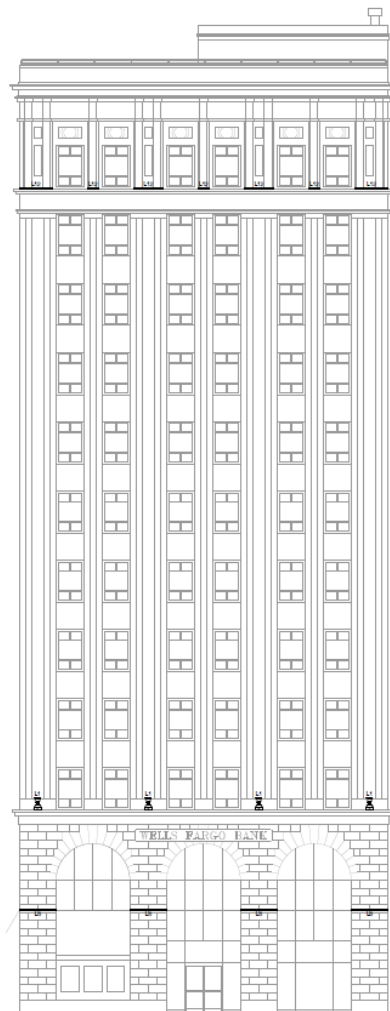
## 2140 Shattuck Ave – Exterior Building Illumination Supplemental Submission 3

### Re-Design Uplight Specification 3/13/19

*Land Use Planning  
Received  
March 18, 2019*

Our goal in illuminating this beautiful building and highlighting the dramatic architectural details is to contribute to the downtown Berkeley skyline and to add the visual enjoyment of the downtown area by the residents, businesses, students and tourists.

It is our assertion that the illumination of this building to highlight the fine historical architectural details will surely add value to each of the neighboring views in comparison to a dark building fascia with sparsely lit office windows.



## Maelisa Reed Lighting

In response to the lighting design program concerns per city staff dated February 15, 2019, we would like to submit the following as a prescription to solve the design criteria concerns.

- **The proposed lighting installation and program are not successfully coordinated with the architectural style of the subject building.**

Our intention when specifying this particular LED Uplight as stated on our original submission is because this platform allows us to paint them to the exact color of the building materials where the fixtures will reside so to blend in and disappear into the other details of the architecture, and only be slightly visible to a passerby who might be looking up at the 2<sup>nd</sup> and 3<sup>rd</sup> floor. The fixture itself is simplest designs amongst building light fixtures in the lighting industry.

Please review these “like” historical lighting projects and notice the industrial look of the fixtures another designer had selected. For the Shattuck lighting project, we carefully selected the specific fixtures because of our attention given to have the fixtures blend and disappear into the building fascia with a minimum visual sign of fixtures.

### Comparable Historical Building San Diego Uplight Project – Using Alternate Uplight Fixtures



LED Uplights on Historical San Diego commerce building

These lights are far more industrial than what we would like to observe on Shattuck building.





## Maelisa Reed Lighting

Comparable Historical Building San Diego Uplight Project – Using Alternate Uplight Fixtures



### LED Uplights on Historical US Grant Hotel

These lights are far more industrial than what we would like to observe on Shattuck building.

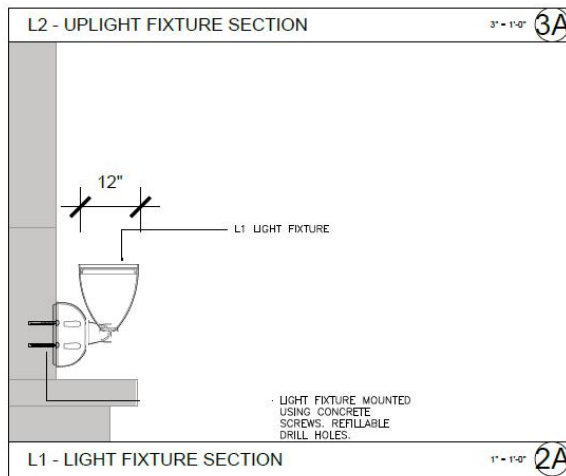
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### Maelisa Reed Lighting

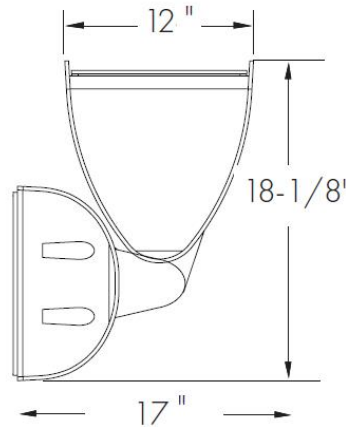
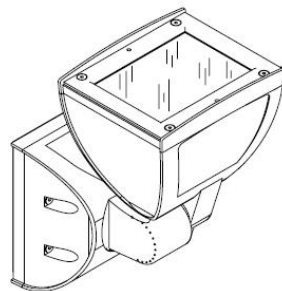
In response to the lighting design program concerns per city staff dated February 15, 2019, we would like to submit the following as a prescription to solve the design criteria concerns.

- The proposed installation is not integrated with the design of the building or site owing primarily to the [obtrusive] profile of proposed fixtures, which are not in scale with the existing building's details.
- The proposed fixtures would project beyond the profile of the existing architectural features and design details of the building and, therefore, have the potential to degrade the character and special qualities of the building.

We have opted to remove the extension arm previously submitted in our design and simply place these fixtures against the fascia creating a smaller more compact profile. The fixtures will be shielded from any view below from pedestrians looking up at the 2<sup>nd</sup> and 3<sup>rd</sup> floor when passing by and be largely shielded by the existing architectural ledge on the building.



SURFACE WALL MOUNT



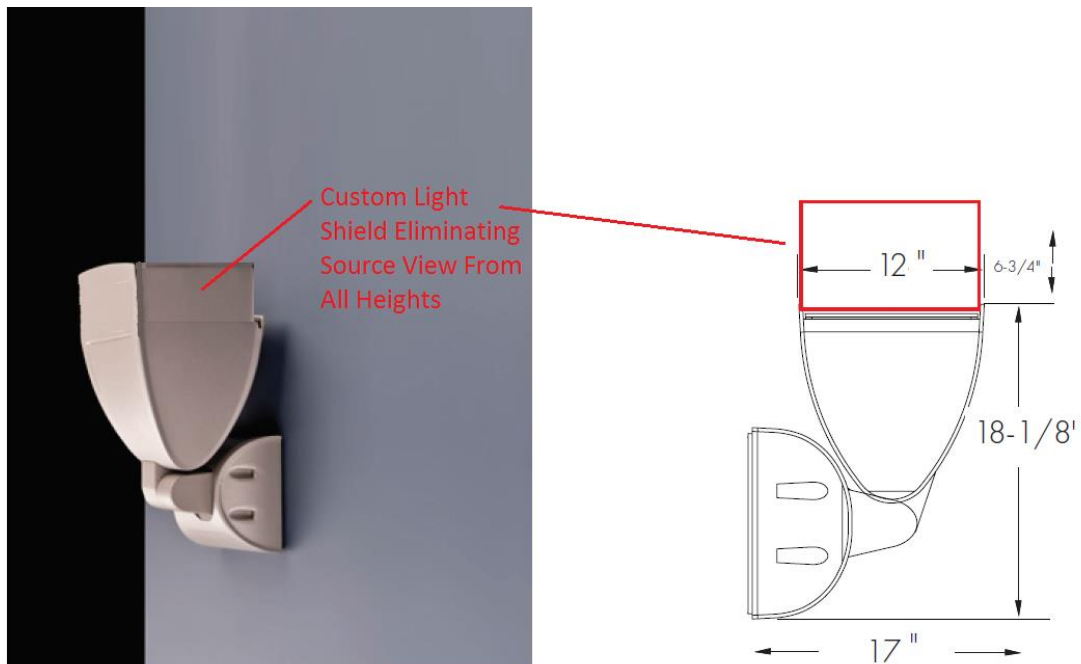
### Maelisa Reed Lighting

In response to the lighting design program concerns per city staff dated February 15, 2019, we would like to submit the following as a prescription to solve the design criteria concerns.

- The project may not be appropriate for this site because the proposed lighting is not shielded to avoid glare from the vantage points within the immediate vicinity of the project where residential and commercial uses and activities occur 24- hours daily.

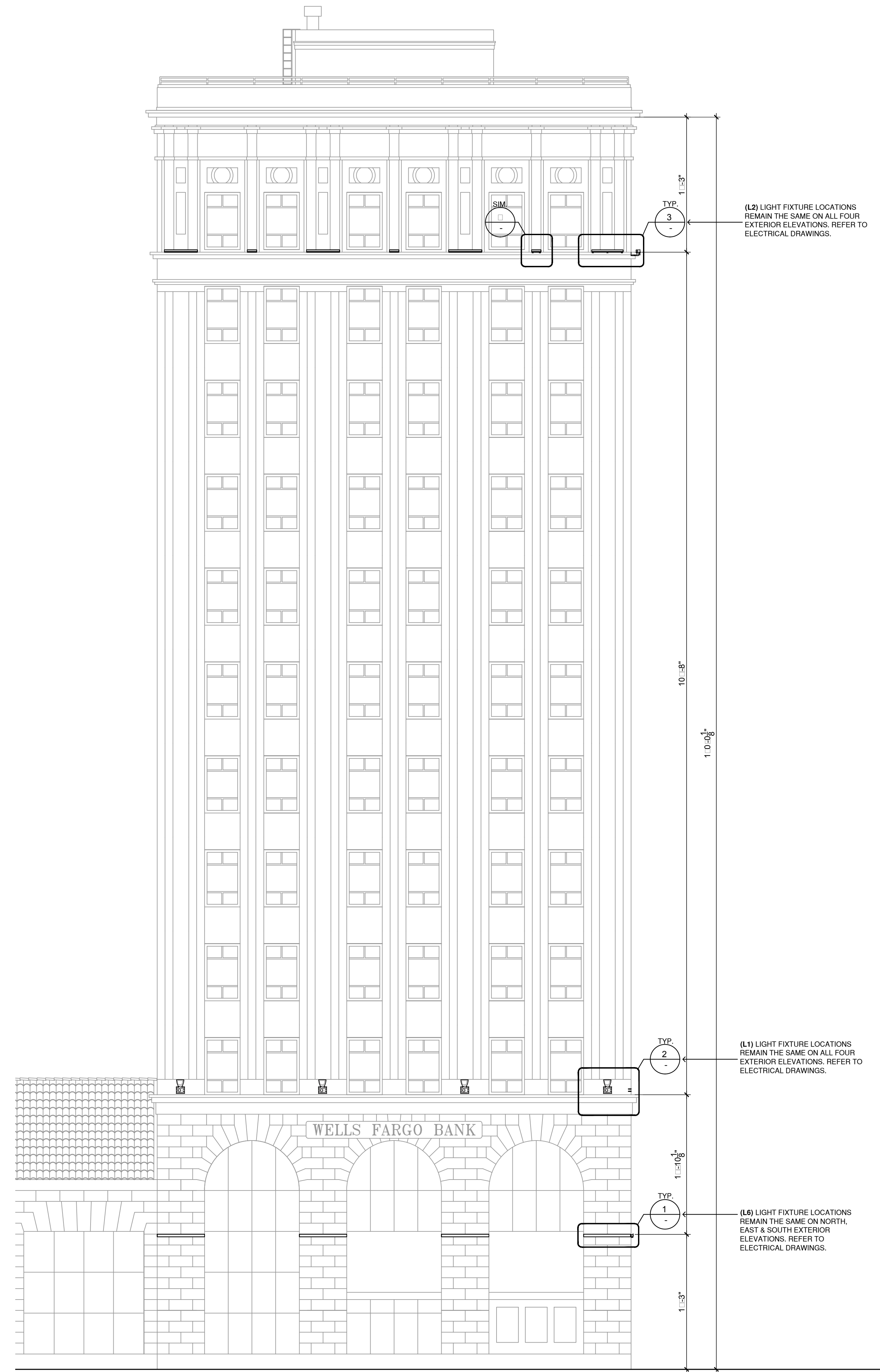
We will install shielding on the Uplight fixtures to prevent light pollution to adjacent buildings. The fixture “as manufactured” is highly engineered to create an extremely narrow 7-degree column of light with no light overspill, in taking into considerations of concerns from staff, we also propose to install side light barriers onto the fixtures as an additional measure focus the soft illumination only on the intended location.

We also propose to install a timer system to the lighting program that would comply with any request to have the lighting partially or fully turned off at desired hours of the night.



**H2**

Hawkins + Hawkins Architects, Inc.  
19,232,000  
19,232,000  
H2A  
2019  
S: 01-25-2019  
C: 01-25-2019  
92101



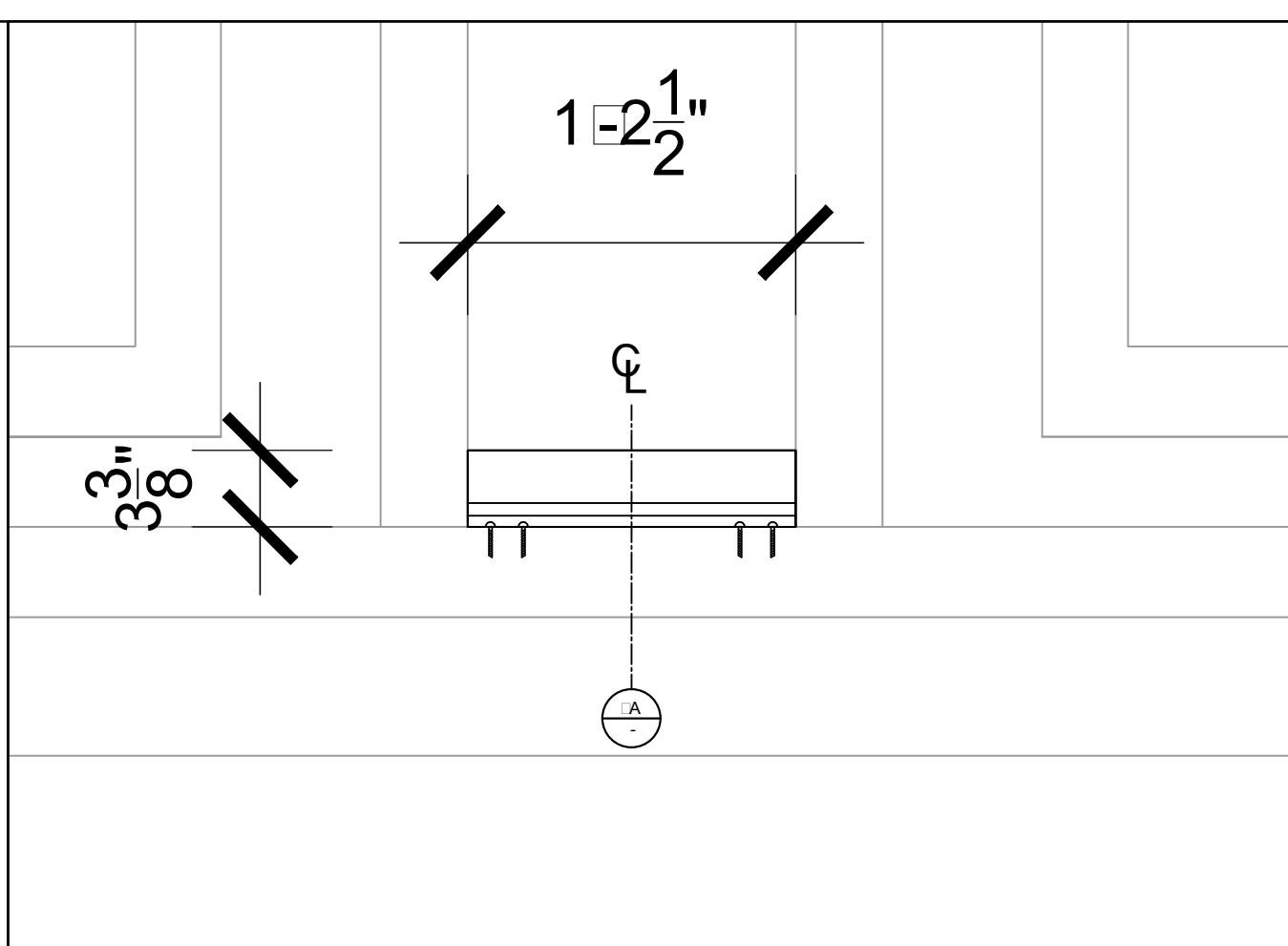
(L2) LIGHT FIXTURE LOCATIONS REMAIN THE SAME ON ALL FOUR EXTERIOR ELEVATIONS. REFER TO ELECTRICAL DRAWINGS.

(L1) LIGHT FIXTURE LOCATIONS REMAIN THE SAME ON ALL FOUR EXTERIOR ELEVATIONS. REFER TO ELECTRICAL DRAWINGS.

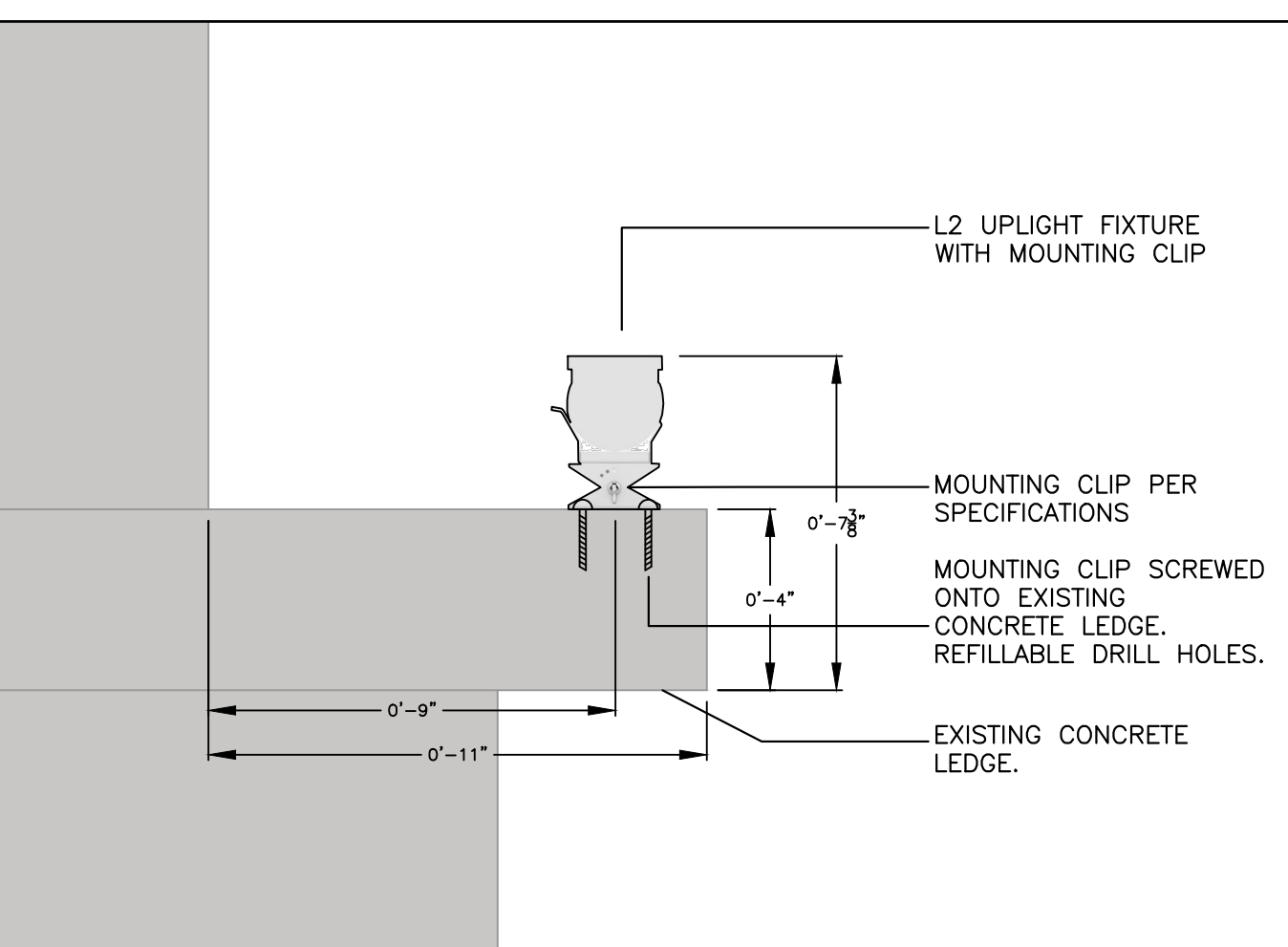
(L6) LIGHT FIXTURE LOCATIONS REMAIN THE SAME ON NORTH, EAST & SOUTH EXTERIOR ELEVATIONS. REFER TO ELECTRICAL DRAWINGS.

SOUTH CENTER STREET ELEVATION

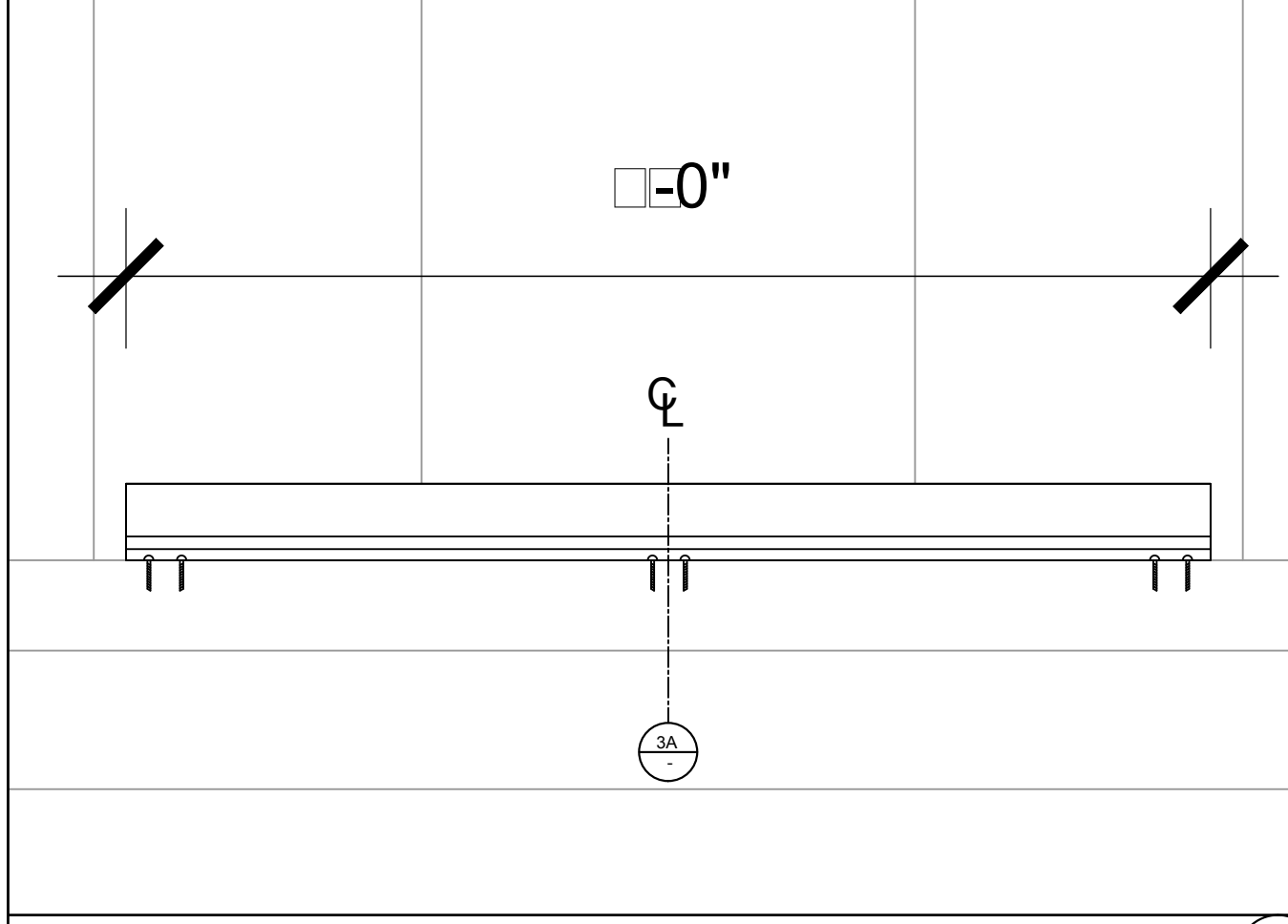
1/8" = 1'-0"



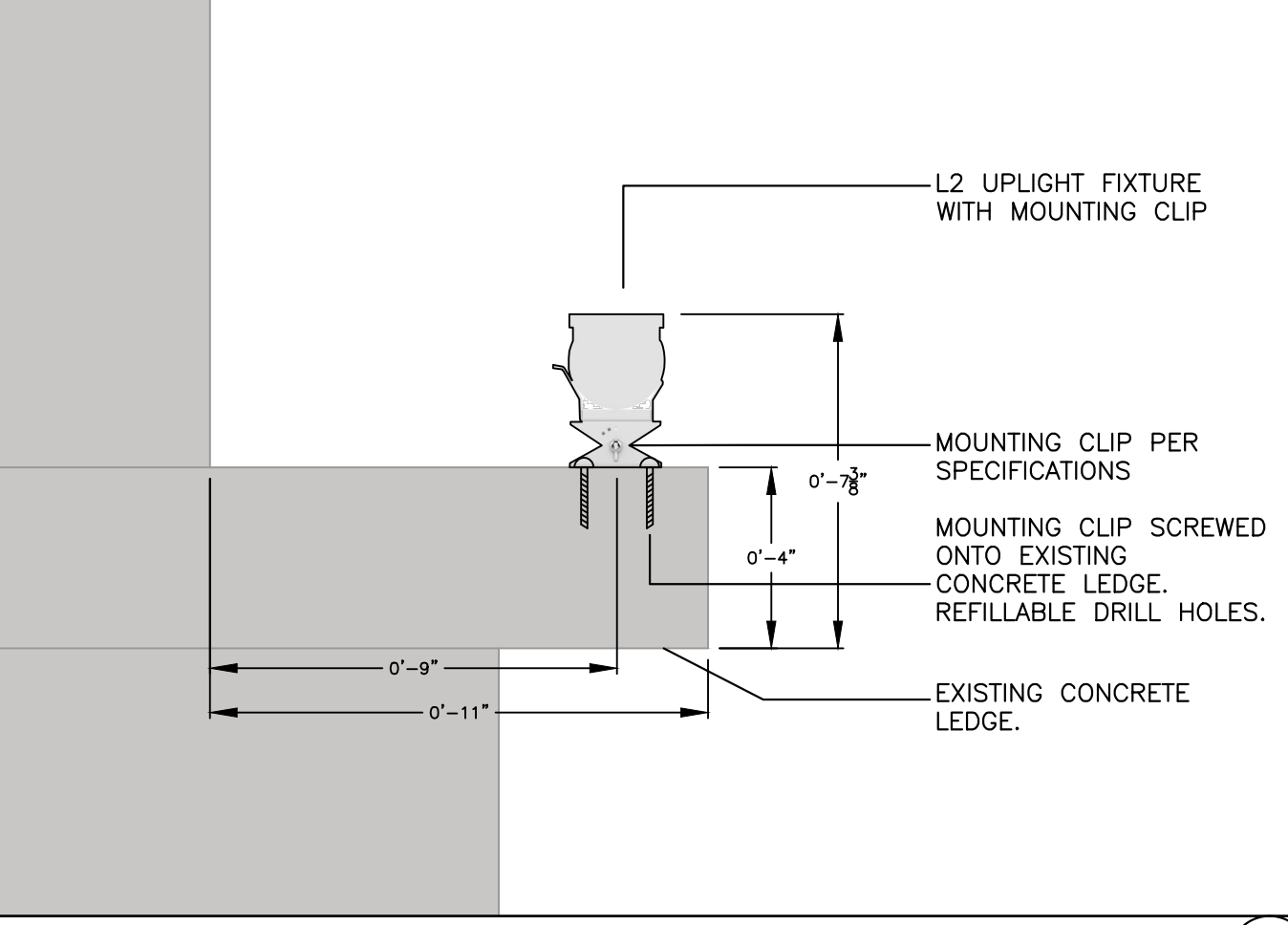
L2 - UPLIGHT FIXTURE 1 1/2" = 1'-0"



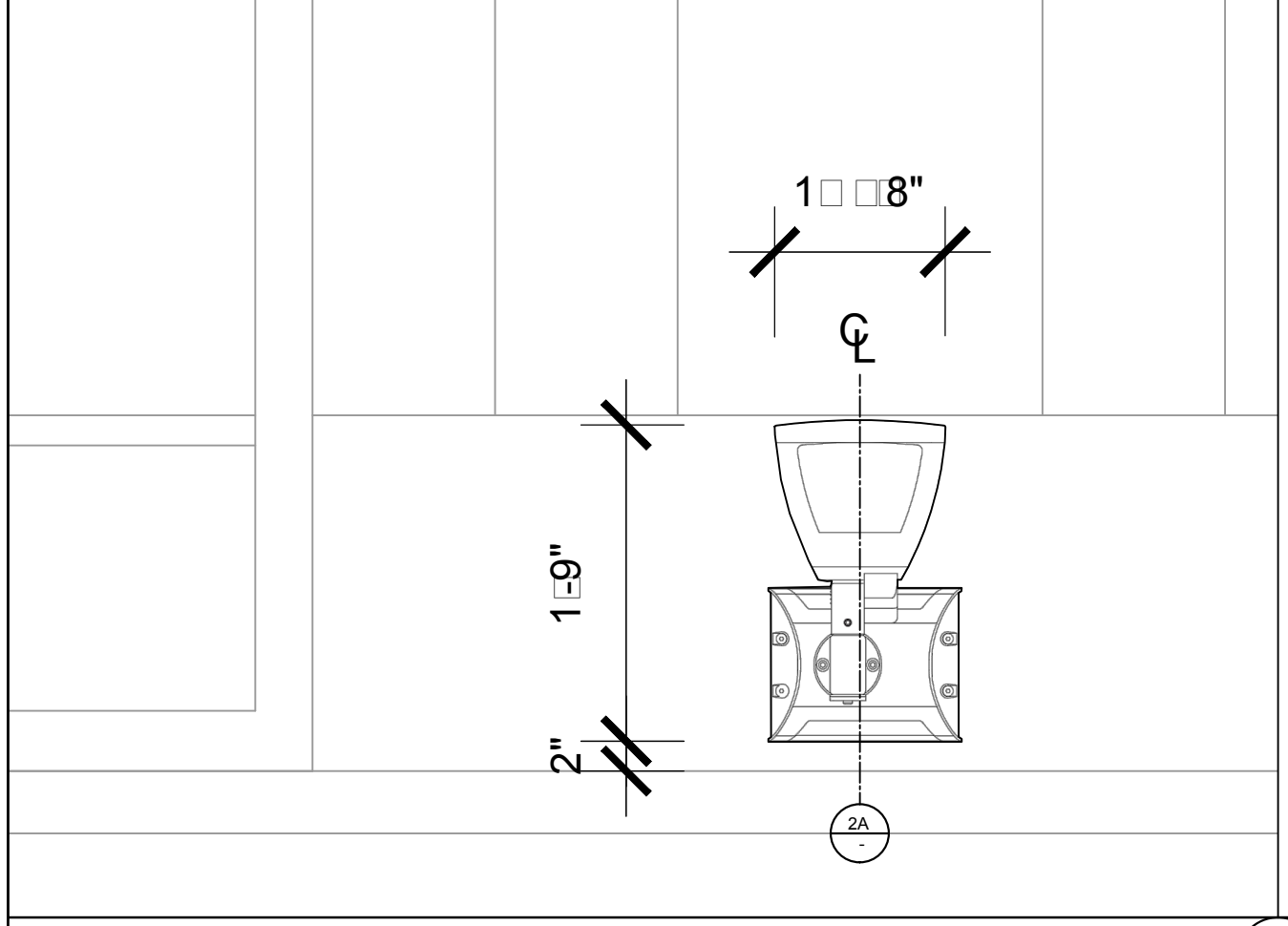
L2 - UPLIGHT FIXTURE SECTION 3" = 1'-0"



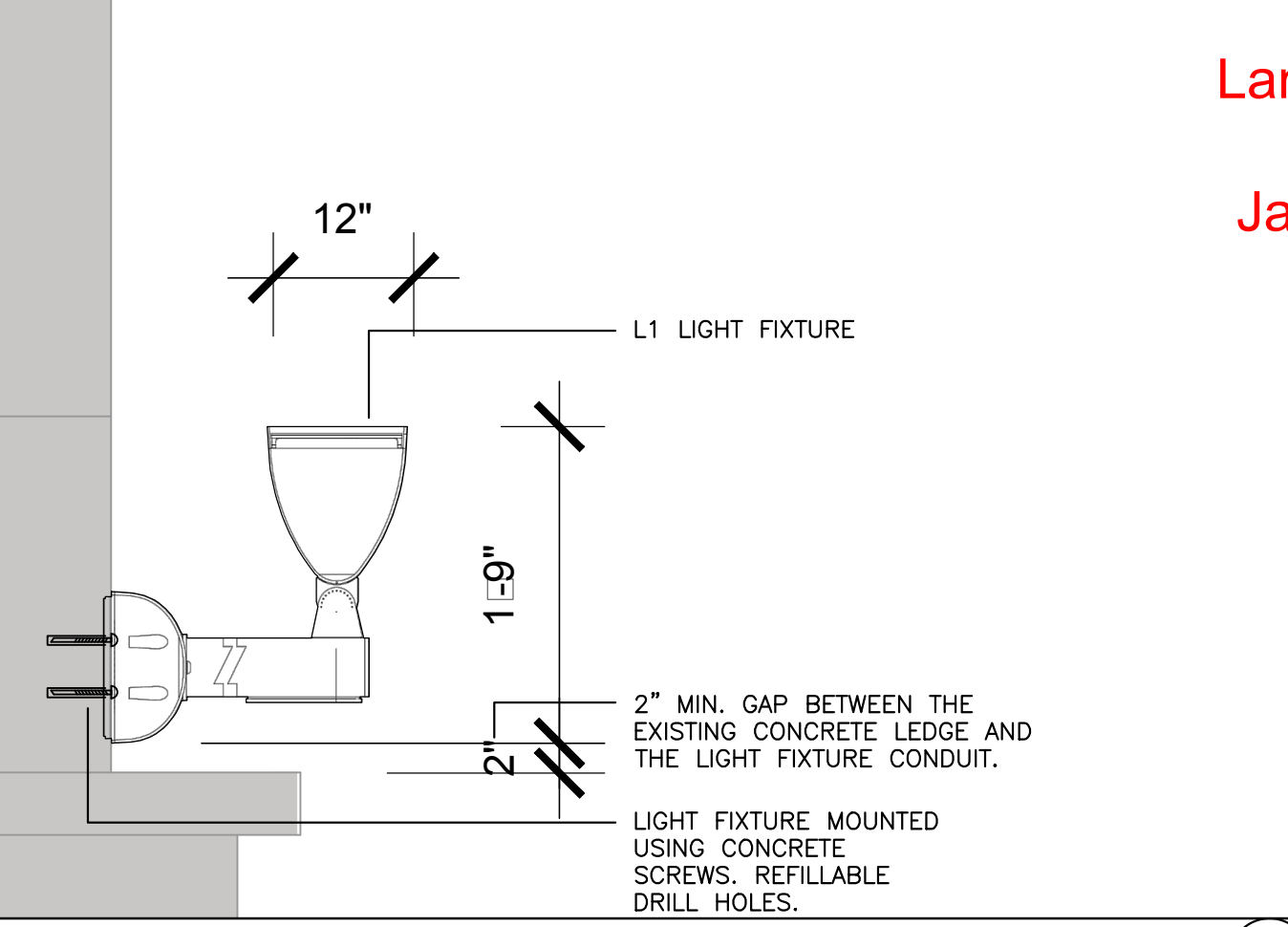
L2 - UPLIGHT FIXTURE 1 1/2" = 1'-0"



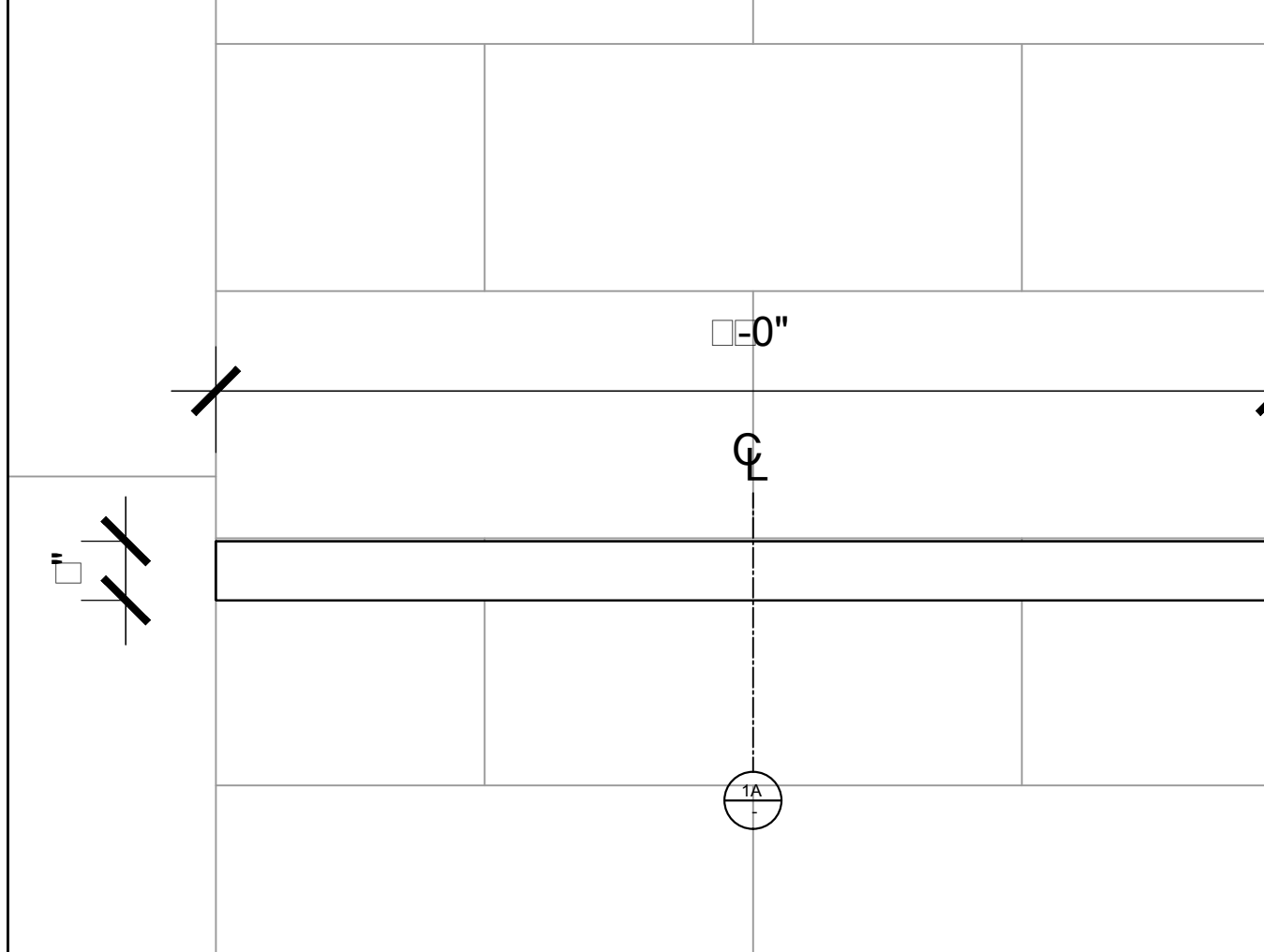
L2 - UPLIGHT FIXTURE SECTION 3" = 1'-0"



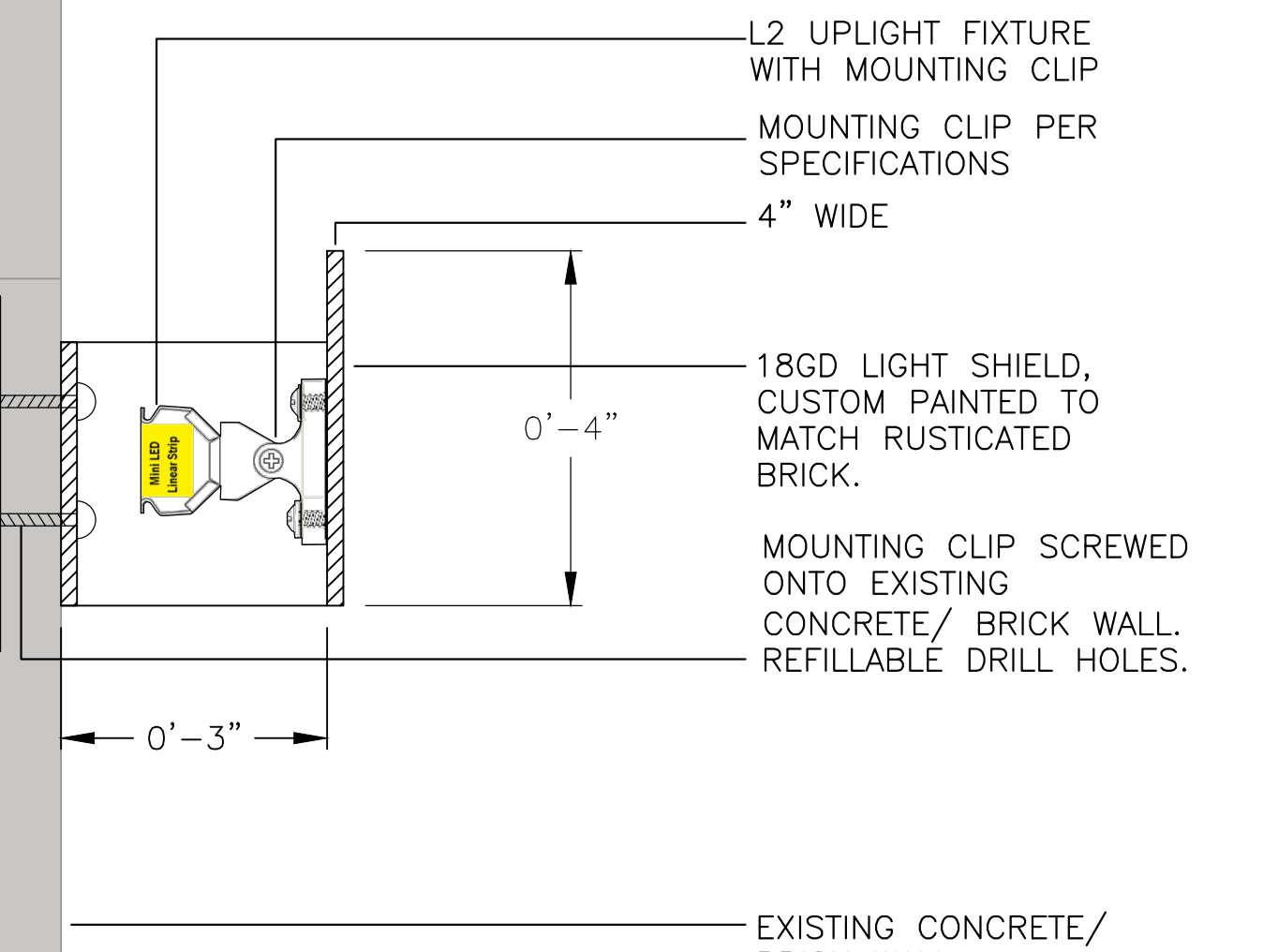
L1 - LIGHT FIXTURE 1" = 1'-0"



L1 - LIGHT FIXTURE SECTION 1" = 1'-0"



L6 - UPLIGHT FIXTURE 1" = 1'-0"



L6 - UPLIGHT FIXTURE SECTION 1" = 1'-0"

Land Use Planning  
Received  
January 25, 2019

2140 SHATTUCK AVE.

| REVISION DATES:        |           |
|------------------------|-----------|
| EXT. BUILDING LIGHTING | 01-2-2019 |

PROJECT NO.: 190

HAWKINS + HAWKINS ARCHITECTS, INC. RESERVES THEIR COMMON-LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS AND DRAWINGS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN PERMISSION AND CONSENT OF HAWKINS + HAWKINS ARCHITECTS, INC.

SCALE:



# SHEET INDEX

| SHEET | DESCRIPTION                                            |
|-------|--------------------------------------------------------|
| E0.00 | GENERAL NOTES, ABBREVIATIONS AND LEGEND SPECIFICATIONS |
| E0.01 | TITLE 24 COMPLIANCE FORMS-EXTERIOR                     |
| E2.02 | 1ST FLOOR EXTERIOR LIGHTING PLAN                       |
| E2.12 | 12TH FLOOR EXTERIOR LIGHTING PLAN                      |
| E4.01 | SOUTH ELEVATION                                        |
| E4.02 | NORTH & EAST ELEVATION                                 |
| E7.00 | FIXTURE SCHEDULE                                       |

# LEGEND

| SYMBOL                               | DESCRIPTION                                                                                                                                                                                                                              |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [Square with dot]                    | NOTE CALLOUT                                                                                                                                                                                                                             |
| [Circle with dot]                    | DETAIL CALLOUT<br>- NUMBER ON TOP DENOTES DETAIL NUMBER<br>- NUMBER ON BOTTOM DENOTES SHEET DETAIL IS SHOWN                                                                                                                              |
| [Hexagon with dot]                   | MECHANICAL EQUIPMENT CALLOUT, SEE MECHANICAL PLANS FOR EXACT LOCATION AND REQUIREMENTS                                                                                                                                                   |
| [Solid line]                         | NEW LINEWORK                                                                                                                                                                                                                             |
| [Dashed line]                        | EXISTING LINEWORK                                                                                                                                                                                                                        |
| [Line with diagonal hatching]        | DEMOLISHED LINEWORK                                                                                                                                                                                                                      |
| [Line with solid hatching]           | CONDUIT CONCEALED IN WALL OR ABOVE CEILING                                                                                                                                                                                               |
| [Line with dashed hatching]          | CONDUIT EXPOSED                                                                                                                                                                                                                          |
| [Line with solid hatching]           | CONDUIT CONCEALED UNDERGROUND OR BELOW FLOOR                                                                                                                                                                                             |
| [Line with 'B' in a square]          | BUSWAYS                                                                                                                                                                                                                                  |
| [Line with 'E' in a square]          | CONDUIT EMERGENCY                                                                                                                                                                                                                        |
| [Line with circle]                   | CONDUIT TURNED UP                                                                                                                                                                                                                        |
| [Line with inverted triangle]        | CONDUIT TURNED DOWN                                                                                                                                                                                                                      |
| [Line with bracket]                  | CONDUIT CAPPED                                                                                                                                                                                                                           |
| [Line with 'A-1' in a square]        | BRANCH CIRCUIT HOMERUN TO PANELBOARD AND CIRCUITS AS INDICATED                                                                                                                                                                           |
| [Line with tick marks]               | 3/4" CONDUIT, TICK MARKS INDICATE QUANTITY OF #12 AWG WIRES (UNLESS NOTED OTHERWISE, NO MARKS INDICATES 2# 12 & 1# 12 GND WIRES)<br>- SMALL MARK DENOTES HOT WIRE<br>- LARGE MARK DENOTES NEUTRAL WIRE<br>- DIAGONAL DENOTES GROUND WIRE |
| [Switch symbol]                      | SWITCH                                                                                                                                                                                                                                   |
| [Circuit breaker symbol]             | CIRCUIT BREAKER                                                                                                                                                                                                                          |
| [2-way switch symbol]                | 2-WAY SWITCH                                                                                                                                                                                                                             |
| [Fuse symbol]                        | FUSE                                                                                                                                                                                                                                     |
| [Transformer symbol]                 | TRANSFORMER                                                                                                                                                                                                                              |
| [Ground connection symbol]           | GROUND CONNECTION                                                                                                                                                                                                                        |
| [Motor symbol]                       | MOTOR - SINGLE PHASE FRACTIONAL OR INTEGRAL HORSEPOWER                                                                                                                                                                                   |
| [Meter symbol]                       | METER                                                                                                                                                                                                                                    |
| [ECM symbol]                         | ELECTRONIC CIRCUIT MONITOR                                                                                                                                                                                                               |
| [Drawout breaker symbol]             | DRAWOUT BREAKER                                                                                                                                                                                                                          |
| [Drawout breaker 2 symbol]           | DRAWOUT BREAKER 2                                                                                                                                                                                                                        |
| [Panel symbol]                       | PANEL                                                                                                                                                                                                                                    |
| [Disconnect switch symbol]           | DISCONNECT SWITCH                                                                                                                                                                                                                        |
| [Fused disconnect switch symbol]     | FUSED DISCONNECT SWITCH                                                                                                                                                                                                                  |
| [Non-fused disconnect switch symbol] | NON-FUSED DISCONNECT SWITCH                                                                                                                                                                                                              |

|                                                                          |                                                                   |
|--------------------------------------------------------------------------|-------------------------------------------------------------------|
| [Square with X]                                                          | COMBINATION STARTER/DISCONNECT SWITCH                             |
| [Vertical oval]                                                          | SPLICE                                                            |
| [Triangle]                                                               | TERMINATION                                                       |
| [Inverted triangle]                                                      | EXISTING TERMINATION                                              |
| [Modular splice symbol]                                                  | MODULAR SPLICE                                                    |
| [Existing modular splice symbol]                                         | EXISTING MODULAR SPLICE                                           |
| [Circle]                                                                 | JUNCTION BOX                                                      |
| [Duplex wall symbol]                                                     | DUPLEX - WALL                                                     |
| [Quad wall symbol]                                                       | QUAD - WALL                                                       |
| [Ground fault circuit interrupter - wall symbol]                         | GROUND FAULT CIRCUIT INTERRUPTER - WALL                           |
| [Dedicated wall symbol]                                                  | DEDICATED - WALL                                                  |
| [Switched wall symbol]                                                   | SWITCHED - WALL                                                   |
| [Single wall symbol]                                                     | SINGLE - WALL                                                     |
| [Special wall symbol]                                                    | SPECIAL - WALL                                                    |
| [Junction box wall symbol]                                               | JUNCTION BOX - WALL                                               |
| [Thermostat with 3/4" conduit to accessible ceiling space - wall symbol] | THERMOSTAT WITH A 3/4" CONDUIT TO ACCESSIBLE CEILING SPACE - WALL |
| [Duplex surface symbol]                                                  | DUPLEX - SURFACE                                                  |
| [Quad surface symbol]                                                    | QUAD - SURFACE                                                    |
| [Ground fault circuit interrupter - surface symbol]                      | GROUND FAULT CIRCUIT INTERRUPTER - SURFACE                        |
| [Dedicated surface symbol]                                               | DEDICATED - SURFACE                                               |
| [Switched surface symbol]                                                | SWITCHED - SURFACE                                                |
| [Single surface symbol]                                                  | SINGLE - SURFACE                                                  |
| [Junction box surface symbol]                                            | JUNCTION BOX - SURFACE                                            |
| [Duplex floor or ceiling symbol]                                         | DUPLEX - FLOOR OR CEILING                                         |
| [Quad floor or ceiling symbol]                                           | QUAD - FLOOR OR CEILING                                           |
| [Ground fault circuit interrupter - floor or ceiling symbol]             | GROUND FAULT CIRCUIT INTERRUPTER - FLOOR OR CEILING               |
| [Dedicated floor or ceiling symbol]                                      | DEDICATED - FLOOR OR CEILING                                      |
| [Switched floor or ceiling symbol]                                       | SWITCHED - FLOOR OR CEILING                                       |
| [Single floor or ceiling symbol]                                         | SINGLE - FLOOR OR CEILING                                         |
| [Junction box floor or ceiling symbol]                                   | JUNCTION BOX - FLOOR OR CEILING                                   |
| [Fire-rated poke-through type duplex receptacle symbol]                  | FIRE-RATED POKE-THROUGH TYPE DUPLEX RECEPTACLE                    |
| [Modular furniture - base power whip feed connection symbol]             | MODULAR FURNITURE - BASE POWER WHIP FEED CONNECTION               |
| [Modular furniture - power pole feed connection symbol]                  | MODULAR FURNITURE - POWER POLE FEED CONNECTION                    |
| [Panelboard, 120/208V - recessed symbol]                                 | PANELBOARD, 120/208V - RECESSED                                   |
| [Panelboard, 277/480V - recessed symbol]                                 | PANELBOARD, 277/480V - RECESSED                                   |
| [Panelboard, 120/208V - surface symbol]                                  | PANELBOARD, 120/208V - SURFACE                                    |
| [Panelboard, 277/480V - surface symbol]                                  | PANELBOARD, 277/480V - SURFACE                                    |
| [Distribution panel, 120/208V symbol]                                    | DISTRIBUTION PANEL, 120/208V                                      |
| [Distribution panel, 277/480V symbol]                                    | DISTRIBUTION PANEL, 277/480V                                      |

# ABBREVIATIONS

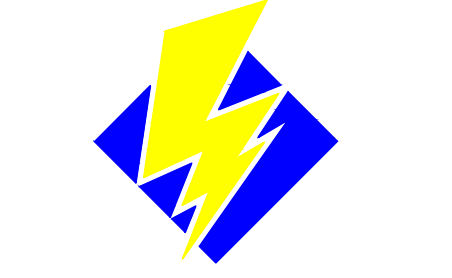
| ABBREVIATION | DESCRIPTION                                               |
|--------------|-----------------------------------------------------------|
| 1/C          | SINGLE CONDUCTOR                                          |
| &            | AND                                                       |
| @            | AT                                                        |
| A OR AMP     | AMPERES                                                   |
| ABV          | ABOVE                                                     |
| A.C.         | ASPHALT CONCRETE                                          |
| AFF          | ABOVE FINISHED FLOOR                                      |
| AFG          | ABOVE FINISH GRADE                                        |
| AIC          | AMPERE INTERRUPTING                                       |
| AL           | ALUMINUM                                                  |
| APPROX.      | APPROXIMATE                                               |
| ARCH.        | ARCHITECT; ARCHITECTURAL                                  |
| ATC          | AIR TERMINAL CHAMBER                                      |
| ATS          | AUTOMATIC TRANSFER SWITCH                                 |
| AUTO         | AUTOMATIC                                                 |
| AUX          | AUXILIARY                                                 |
| AWG          | AMERICAN WIRE GAUGE                                       |
| BAT          | BATTERY                                                   |
| BEL          | BELOW                                                     |
| BKBD         | BACKBOARD                                                 |
| BKR          | BREAKER                                                   |
| BLDG         | BUILDING                                                  |
| B.S.         | BARE STRANDED                                             |
| C            | CONDUIT                                                   |
| CB           | CIRCUIT BREAKER                                           |
| CC           | CONSTANT CURRENT                                          |
| CKT          | CIRCUIT                                                   |
| CL           | CENTER LINE                                               |
| CLG          | CEILING                                                   |
| CMU          | CONCRETE MASONRY UNIT                                     |
| C.O.         | CONDUIT ONLY WITH PULL WIRE                               |
| COL          | COLUMN                                                    |
| CP           | COMMUNICATION PROCESSOR CONTROL POWER                     |
| CPT          | TRANSFORMER CONTROL RELAY                                 |
| CR           | CALIFORNIA STATE UNIVERSITY COMBINATION SMOKE FIRE DAMPER |
| CSU          | CURRENT TRANSFORMER                                       |
| CSFD         | COLD WATER COPPER                                         |
| CT           | DIAGRAM                                                   |
| CW           | DAMP LOCATION LISTING                                     |
| CU           | DIGITAL METER                                             |
| DIAG         | DISTRIBUTION PANEL                                        |
| DL           | DIST.                                                     |
| DM           | DRAWING                                                   |
| DP           | DISTANCE                                                  |
| DWG          | DRAWING DEPARTMENT OF WATER & POWER                       |
| DWP          | EACH ELECTRICAL                                           |
| EA           | ELECTRICAL                                                |
| ELEC.        | ELECTRICAL                                                |
| EMH          | ELECTRICAL MANHOLE                                        |
| EMT          | ELECTRICAL METALLIC TUBING                                |
| EPO          | EMERGENCY POWER OFF                                       |
| EPR          | ETHYLENE PROPYLENE RUBBER EQUIPMENT                       |
| EQUIP        | EQUIPMENT                                                 |
| EXIST/(E)    | EXISTING                                                  |
| EXP          | EXPLOSION PROOF                                           |
| FA           | FIRE ALARM                                                |
| FFE          | FINISHED FLOOR ELEVATION                                  |
| FIN.         | FINISH                                                    |
| FIP          | FIELD INTERFACE PANEL                                     |
| FIXT         | FIXTURE                                                   |
| FLA          | FULL LOAD AMPS                                            |
| FLR          | FLOOR                                                     |
| FLUOR        | FLUORESCENT                                               |
| FT           | FEET                                                      |
| FACP         | FIRE ALARM CONTROL PANEL                                  |
| FATC         | FIRE ALARM TERMINAL CABINET                               |
| FO           | FIBER OPTIC                                               |
| FTG          | FOOTING                                                   |
| GFI          | GROUND FAULT INTERRUPTER                                  |
| GFR          | GROUND FAULT RELAY                                        |
| GG           | GREEN GROUND                                              |
| GND          | GROUND                                                    |
| HOA          | HAND-OFF-AUTOMATIC                                        |
| HP           | HORSEPOWER                                                |
| HT           | HEIGHT                                                    |
| HTR          | HEATER                                                    |
| HZ           | HERTZ                                                     |
| IE           | INVERT ELEVATION                                          |
| ISC          | SHORT CIRCUIT CURRENT                                     |
| INCAKD       | INCADESCENT                                               |
| JB           | JUNCTION BOX                                              |
| KCMIL        | THOUSAND CIRCULAR MILS                                    |
| KV           | KILOVOLT                                                  |

IN THE EVENT ABBREVIATIONS NOT MENTIONED HEREIN ARE USED, REFERENCE WILL BE MADE TO ANSI Y1.1, MILITARY STANDARD ABBREVIATIONS, AND OTHER STANDARD INDUSTRY CONVENTIONS.

| ABBREVIATION | DESCRIPTION                               |
|--------------|-------------------------------------------|
| KVA          | KILOVOLT-AMPERES                          |
| KW           | KILOWATT                                  |
| LF           | LINEAR FEET                               |
| LIS          | LOAD INTERRUPTER SWITCH                   |
| LOC.         | LOCATION                                  |
| LTG          | LIGHTING                                  |
| LV           | LOW VOLTAGE                               |
| MAX          | MAXIMUM                                   |
| MCC          | MOTOR CONTROL CENTER                      |
| MCP          | MOTOR CIRCUIT PROTECTOR                   |
| MFGFR        | MANUFACTURER                              |
| MH           | MANHOLE                                   |
| MI.          | MECHANICAL INTERLOCK                      |
| MRCT         | MULTI-RATIO CURRENT TRANSFORMER           |
| MTD          | MOUNTED                                   |
| MTG          | MOUNTING                                  |
| MV           | MEDIUM VOLTAGE                            |
| N            | NORTH                                     |
| NAC          | NOTIFICATION APPLIANCE CIRCUIT            |
| NC           | NORMALLY CLOSED                           |
| NEC          | NATIONAL ELECTRICAL CODE                  |
| NF           | NON-FUSED                                 |
| NIC          | NOT IN CONTRACT                           |
| NL           | NIGHT LIGHT - 24HRS ON NUMBER             |
| NO.          | NUMBER                                    |
| OC           | ON CENTER                                 |
| OD           | OUTSIDE DIAMETER                          |
| OE           | OVERHEAD ELECTRICAL                       |
| OFC          | OIL FUSED CUTOFF                          |
| OH           | OVERHEAD                                  |
| OL           | OIL LEVER SWITCH                          |
| P            | POLE                                      |
| PB           | PULL BOX                                  |
| PC           | PHOTOCELL                                 |
| PCB          | POLYCHLORINATED BIPHENYL                  |
| PDS          | PRESSURE DIFFERENTIAL SWITCH              |
| PF           | POWER FACTOR                              |
| PH OR Ø      | PHASE                                     |
| PILC         | PAPER INSULATED, LEAD COVER               |
| PIV          | POST INDICATING VALVE                     |
| PL           | PLATE                                     |
| PNL          | PANEL                                     |
| POC          | POINT OF CONNECTION                       |
| PRI.         | PRIMARY                                   |
| PVC          | POLY-VINYL CHLORIDE                       |
| PWR          | POWER                                     |
| REC/RECEPT   | RECEPTACLE                                |
| REQ'D        | REQUIRED                                  |
| RGS          | RIGID GALVANIZED STEEL                    |
| RBSP         | REDUCED PRESSURE BACK FLOW PREVENTER ROOM |
| RM           | SOUTHERN CALIFORNIA EDISON ROOM           |
| SCE          | SQUARE FEET                               |
| SF           | SHEET                                     |
| SHT          | SIGNAL                                    |
| SIG.         | SIGNAL                                    |
| SP           | SPARE                                     |
| SPECS        | SPECIFICATIONS                            |
| ST           | STREET                                    |
| STD          | STANDARD                                  |
| SW           | SWITCH                                    |
| SWBD         | SWITCHBOARD                               |
| SWGR         | SWITCHGEAR                                |
| SWT          | SWITCHING STATION                         |
| TB           | TERMINAL BLOCK                            |
| TEL/TELE     | TELEPHONE                                 |
| TMH          | TELEPHONE MANHOLE                         |
| T.O.D.       | TOP OF DUCTBANK                           |
| T.O.M.       | TOP OF MANHOLE                            |
| TPS          | TWISTED SHIELDED PAIR                     |
| TRANSF/XFMR  | TRANSFORMER                               |
| TS           | TAMPER SWITCH                             |
| TYP          | TYPICAL                                   |
| UG           | UNDERGROUND                               |
| UON          | UNLESS OTHERWISE NOTED                    |
| V            | VOLTS                                     |
| VA           | VOLT-AMPERES                              |
| VB           | VIBRATION SWITCH                          |
| VFD          | VARIABLE FREQUENCY DRIVE                  |
| W            | WATTS                                     |
| W/           | WITH                                      |
| W/O          | WITHOUT                                   |
| WP           | WEATHERPROOF                              |
| Z            | IMPEDANCE                                 |

# GENERAL NOTES

- ALL WORK SHALL COMPLY WITH THE 2017 EDITION OF THE CALIFORNIA ELECTRICAL CODE AND ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL CODES. WHERE THE CONSTRUCTION DOCUMENTS INDICATE MORE RESTRICTIVE REQUIREMENTS, THE CONSTRUCTION DOCUMENTS SHALL GOVERN BUT THE CONSTRUCTION DOCUMENTS SHALL NOT BE INTERPRETED AS AUTHORITY TO VIOLATE ANY CODE OR REGULATION.
- IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN ITEMS INDICATED ON THE PLANS AND/OR SPECIFICATIONS OR WITH CODE REQUIREMENTS, THE NOTE, SPECIFICATION OR CODE WHICH PRESCRIBES AND ESTABLISHES THE MORE COMPLETE JOB OR THE HIGHER STANDARD SHALL PREVAIL.
- OMISSION FROM THE DRAWINGS OR SPECIFICATIONS OR THE MISDESCRIPTION OF DETAILS OF WORK WHICH ARE MANIFESTLY NECESSARY TO CARRY OUT THE INTENT OF THE DRAWINGS AND SPECIFICATIONS, OR WHICH ARE CUSTOMARILY PERFORMED, SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING SUCH OMITTED OR MISDESCRIBED DETAILS OF THE WORK BUT THEY SHALL BE PERFORMED AS IF FULLY AND CORRECTLY SET FORTH AND DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL CHECK ALL DRAWINGS FURNISHED HIM/HER IMMEDIATELY UPON THEIR RECEIPT AND SHALL PROMPTLY NOTIFY THE OWNER OF ANY DISCREPANCIES. FIGURES MARKED ON DRAWINGS SHALL IN GENERAL BE FOLLOWED IN PREFERENCE TO SCALE MEASUREMENTS. LARGE SCALE DRAWINGS SHALL GOVERN SMALL SCALE DRAWINGS. THE CONTRACTOR SHALL COMPARE ALL DRAWINGS AND VERIFY THE FIGURES BEFORE LAYING OUT THE WORK AND WILL BE RESPONSIBLE FOR ANY ERRORS WHICH MIGHT HAVE BEEN AVOIDED THEREBY.
- THE CONTRACTOR SHALL FURNISH ALL PERMITS AND PAY ALL FEES, UNLESS OTHERWISE DIRECTED BY THE OWNER.
- ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BEAR THE UNDERWRITERS LABEL (UL) AND SHALL BE INSTALLED IN THE MANNER FOR WHICH THEY ARE DESIGNED AND APPROVED.
- UNLESS NOTED OTHERWISE, ALL WIRE SHALL BE STRANDED COPPER. ALL WIRE SHALL BE UL LISTED, RATED FOR 600 VOLTS, TYPE THHN/THWN INSULATION, NO. 12 MINIMUM SIZE EXCEPT FOR CONTROLS.
- THE CONTRACTOR SHALL INSTALL ALL CONDUITS AND WIRES WITH A MINIMUM NUMBER OF BENDS AND IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE. AVOID OBSTRUCTIONS, PRESERVE HEAD ROOM, KEEP OPENINGS AND PASSAGEWAYS CLEAR AND MEET ALL STRUCTURAL CODE REQUIREMENTS.
- THE CONTRACTOR SHALL PROVIDE SUPPORT FOR ALL FIXTURES AND ELECTRICAL EQUIPMENT TO COMPLY WITH THE SEISMIC REQUIREMENTS OF THE UNIFORM BUILDING CODE AND ALL LOCAL ORDINANCES.
- THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES AND THE SERVING UTILITY. TRANSFORMER NEUTRAL SHALL BE GROUNDED TO STEEL COLUMN.
- THE ENTIRE WIRING SYSTEM SHALL BE TESTED FOR SHORT CIRCUITS, GROUNDS AND INSULATION RESISTANCE BETWEEN CONDUCTORS AND TO GROUND.
- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUITS, WIRES, BOXES, SWITCHES, LIGHT FIXTURES (WITH LAMPS), RECEPTACLES AND SERVICE DEVICES REQUIRED FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM.
- VERIFY EXISTING SITE CONDITIONS, SERVICE REQUIREMENTS, AND EXACT LOCATIONS OF SERVICE FACILITIES BEFORE SUBMITTING BID.
- ALL NEW ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH A SELF-ADHESIVE, ENGRAVED, LAMINATED ACRYLIC OR MELAMINE NAMEPLATE WITH BLACK LETTERING ON WHITE BACKGROUND. LETTERING HEIGHT SHALL BE 3/8" MINIMUM INDICATING THE PANEL NAME, PANEL VOLTAGE AND WHERE PANEL IS FED FROM. NAMEPLATE SHALL BE 2-1/2" X 5" MINIMUM. ALL NEW PANELS SHALL BE PROVIDED WITH TYPEWRITTEN DIRECTORY CARD IDENTIFYING ALL LOAD SERVED BY EACH CIRCUIT BREAKER.
- FOR PURPOSES OF CLEARNESS AND LEGIBILITY, THE ELECTRICAL DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC. THE SIZE AND LOCATION OF EQUIPMENT IS SHOWN TO SCALE WHEREVER POSSIBLE. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DATA INFORMATION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATION SECTIONS WHERE ELECTRICAL WORK INTERFACES WITH OTHER TRADES.
- REMOVE ALL ABANDONED CONDUIT TO NEAREST JUNCTION BOX.
- REMOVE ALL ABANDONED WIRES BACK TO PANEL BOARD. LABEL CIRCUIT BREAKER AS SPARE.
- ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE CALIFORNIA STATE HANDICAP LAWS WITH REGARDS TO THE FOLLOWING:
  - A. MOUNTING HEIGHT OF RECEPTACLES: NO RECEPTACLES SHALL BE MOUNTED ON A WALL AT LESS THAN 15" AFF.
  - B. MOUNTING HEIGHT OF SWITCHES AND THERMOSTATS: DEVICES SHALL BE MOUNTED AT NO HIGHER THAN 48" AFF FROM CENTER OF DEVICE BUT NOT LOWER THAN 36" AFF.
- ELECTRICAL CONTRACTOR TO LABEL RECEPTACLES, JUNCTION BOXES, DISCONNECT SWITCHES, VFDs ETC. WITH CORRESPONDING PANEL NAME AND CIRCUIT.
- COLOR CODING: COLOR SHALL BE GREEN FOR GROUNDING CONDUCTORS AND WHITE FOR NEUTRALS. EXCEPT WHERE NEUTRAL OF MORE THAN ONE SYSTEM ARE INSTALLED IN SAME RACEWAY OR BOX, OTHER NEUTRAL SHALL BE WHITE WITH COLORED (NOT GREEN) STRIPE. THE WIRING FOR 3-PHASE SYSTEM SHALL BE CHECKED FOR "CLOCKWISE" (ABC) PHASE ROTATION. COLOR OF UNGROUNDED CONDUCTORS IN DIFFERENT VOLTAGE SYSTEM SHALL BE AS FOLLOWS:
  - 1. 208Y/120VOLT, 3Ø:  
(a) PHASE A - BLACK INSULATION (TAPE NOT ACCEPTABLE)  
(b) PHASE B - RED INSULATION (TAPE NOT ACCEPTABLE)  
(c) PHASE C - BLUE INSULATION (TAPE NOT ACCEPTABLE)
  - 2. 480Y/277 VOLT 3Ø:  
(a) PHASE A - BROWN INSULATION (TAPE NOT ACCEPTABLE)  
(b) PHASE B - ORANGE INSULATION (TAPE NOT ACCEPTABLE)  
(c) PHASE C - YELLOW INSULATION (TAPE NOT ACCEPTABLE)
- ALL OUTDOOR EXPOSED CONDUITS SHALL BE RIGID GALVANIZED STEEL (RGS) UNLESS OTHERWISE NOTED. OUTDOOR EXPOSED CONDUITS SHALL BE PAINTED TO MATCH THE EXTERIOR OF BUILDING UNLESS OTHERWISE DIRECTED BY OWNER.
- CONTRACTOR TO PERFORM AND PREPARE AS-BUILT DRAWINGS. ALL AS-BUILT DRAWINGS SHALL BE SUBMITTED TO FACILITIES ENGINEERING REPRESENTATIVE IN CHARGE OF THE PROJECT.
- LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUITS SHALL BE 6 FEET IN LENGTH MAXIMUM. ALL VIBRATING EQUIPMENT (IE: MOTORS, TRANSFORMERS, ETC.) SHALL BE CONNECTED WITH A LIQUIDTIGHT FLEX CONDUIT.
- CONTRACTOR SHALL PROVIDE BARRICADE, SAFETY SIGNS AND OTHER DEVICES TO ISOLATE WORK AREA DURING CONSTRUCTION, UPON OWNERS REPRESENTATIVE'S APPROVAL.
- CONTRACTOR SHALL REPAIR/PATCH AND WEATHER PROOF ANY OPENING CAUSED BY EQUIPMENT/PIPING INSTALLATION, AND SHALL PAINT WHERE NECESSARY.
- COORDINATE ANY AND ALL SHUTDOWNS WITH OWNERS REPRESENTATIVE. SHUTDOWNS SHALL BE OFF HOURS.
- DAILY CLEAN-UP OF JOB IS MANDATORY.
- THE ENTIRE ELECTRICAL INSTALLATION SHALL BE PROVIDED WITH A 3/4" MINIMUM CONDUIT INCLUDING CONTROL CONDUITS AND LOW VOLTAGE.
- MC TYPE CABLES ARE NOT ALLOWED.
- THE CONTRACTOR SHALL PROVIDE AN INDEPENDENT LICENSED TESTING ORGANIZATION TO CERTIFY AND ACCEPT THE LIGHTING CONTROL SYSTEMS AS REQUIRED BY THE 2016 CALIFORNIA ENERGY CODE.
- THE FIRE ALARM SYSTEM SHALL BE UNDER SEPARATE PLANS AND PERMITS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING OF ALL NEW OR MODIFIED ELECTRICAL PER LATEST NETA STANDARD.
- ONLY STEEL COMPRESSION TYPE FITTINGS ARE ACCEPTABLE (NO SET-SCREW TYPE ALLOWED)
- ALL EXPOSED SURFACE MOUNTED AND EXTERIORS CONDUITS SHALL BE PAINTED TO MATCH WALL COLOR. ALL FIRE ALARM CONDUITS SHALL BE FACTORY PAINTED RED CONDUIT AND ALL CONTROL CONDUITS SHALL BE FACTORY PAINTED BLUE CONDUIT.
- ONLY STEEL COMPRESSION TYPE FITTINGS ARE ACCEPTABLE (NO SET-SCREW TYPE ALLOWED)
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SUPPORTS TO ALL CONDUITS/HOMERUNS SHOWN ON THE DRAWINGS AND OTHER CONDUITS REQUIRED FOR FIRE ALARM, CONTROLS AND SECURITY SYSTEMS AS REQUIRED BY THE N.E.C. PROVIDE CODE SIZED PULLBOXES AS REQUIRED BASED ON THE FIELD CONDITIONS.
- ALL SPLICES SHALL BE HI-PRESS SPLICES ONLY.
- CONTRACTOR SHALL HIRE AN INDEPENDENT TESTING COMPANY FOR TESTING ALL NEW BREAKER SETTINGS AND ALL NEW ELECTRICAL EQUIPMENT. TESTING SHALL BE PERFORMED PER NETA STANDARDS. BREAKER SETTINGS SHALL BE PROVIDED BY PHASE C CONSULTING. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ARC FLASH LABELS FOR ALL NEW EQUIPMENT.



**PHASE C CONSULTING**  
 5332 SEVILLE CIRCLE  
 LA PALMA, CA 90623  
 562.292.5613  
 WWW.PHASE-C.COM

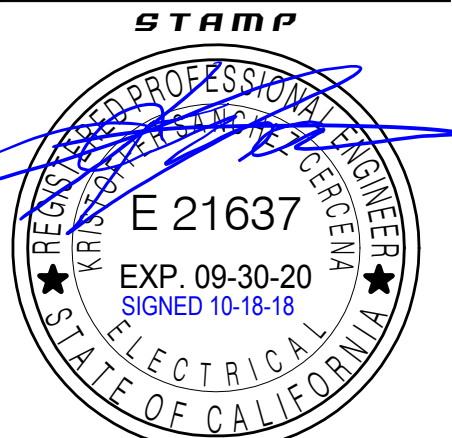
CLIENT

CONSULTANT

PROJECT LOCATION **SOUTH BERKELEY**

C-617G  
 2140 SHATTUCK AVE.  
 BERKELEY, CA 94704

**GENERAL NOTES, LEGEND ABBREVIATIONS, & SHEET INDEX**



SHEETS BEARING THIS SEAL AND WET SIGNATURE ARE AUTHENTICATED. RESPONSIBILITY FOR ALL OLDER PLANS, SPECIFICATIONS OR INSTRUMENTS ARE DISCLAIMED.

REVISIONS

| NO. | DESCRIPTION |
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DATE  
2018.10.18

PROJECT NUMBER  
MAE-1801

SHEET NUMBER

**E0.01**

ISSUE FOR PLAN CHECK: 2018\_10\_18



DIVISION 26-ELECTRICAL SPECIFICATIONS

**PART 1- GENERAL**

- A. GENERAL
- 1. GENERAL CONDITIONS, SPECIAL REQUIREMENTS OR GENERAL REQUIREMENTS OF THE PROJECT SPECIFICATIONS MANUAL ARE MADE PART OF THIS SPECIFICATION AND HAVE THE SAME FORCE AND EFFECT AS IF COMPLETELY REPRODUCED.
- 2. DEFINITIONS: THE WORD "WORK" SHALL MEAN LABOR AND ANY INCIDENTAL ITEMS OR SERVICES NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE COMPLETE SYSTEMS NOTED ON THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS. THE WORD "PROVIDE" SHALL MEAN FURNISH AND INSTALL AND MAKE FINAL CONNECTIONS AND LEAVE IN AN APPROVED COMPLETED, TESTED AND OPERATING CONDITION PRIOR TO FINAL ACCEPTANCE BY OWNER.
- 3. WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE LATEST ADOPTIONS OF THE APPLICABLE CALIFORNIA ELECTRICAL CODE, TITLE 24, PART 6 AND OTHER APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, INCLUDING AMENDMENTS.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING FEES AND OBTAINING PERMITS AND INSPECTIONS REQUIRED FOR THE PROJECT SCOPE OF WORK.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FITTING OF MATERIAL INTO THE BUILDING AS INDICATED ON DRAWINGS, WITHOUT INTERFERENCE WITH OTHER WORK, AND SHALL MAKE REASONABLE MODIFICATIONS IN THE LAYOUTS NEEDED TO PREVENT CONFLICT WITH OTHER TRADES, TO PROVIDE ACCESS AND FOR THE PROPER EXECUTION OF THE WORK.
- 6. WORK SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES INCLUDING CONTRACT DOCUMENTS, SHOP DRAWINGS, AND EXISTING SYSTEMS.
- 7. DO NOT SCALE DRAWINGS AS THEY ARE DIAGRAMMATIC AND SCHEMATIC IN NATURE. CONTRACTOR SHALL PROVIDE NECESSARY ITEMS TO COMPLETE THE WORK ACCORDING TO INDUSTRY STANDARDS. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS TO CALL OUT FOR FINISHED WORK, TESTED AND READY FOR OPERATIONS. ARRANGEMENT OF EQUIPMENT AND ROUTING OF RACEWAYS INDICATED ON DRAWINGS SHALL BE Routed PLUMB AND AT RIGHT ANGLES. INSTALLATION OF SYSTEMS MAY REQUIRE MODIFICATION DUE TO UNFORESEEN CONDITIONS.
- 8. VERIFY ALL SIZES, DIMENSIONS, AND CONDITIONS BEFORE STARTING ANY WORK. ANY DEVIATIONS OR PROBLEMS SHALL BE TRANSMITTED TO ARCHITECT AND/OR ENGINEER FOR REVIEW.
- 9. CONTRACTOR SHALL SUBMIT A BID BASED ON MANUFACTURER NAMES LISTED UNLESS "OR EQUAL" IS INDICATED. SUBSTITUTION REQUESTS WILL BE REVIEWED BY THE ENGINEER, AND MUST BE SUBMITTED AT A MINIMUM SEVEN (7) BUSINESS DAYS PRIOR TO BID DATE. CLOSING ACCEPTABILITY OF SUBSTITUTION WILL BE SOLELY DETERMINED BY THE OWNER.
- 10. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY.
- 11. EXAMINATION OF BIDDING DOCUMENTS:
  - 11.1 EACH BIDDER SHALL EXAMINE THE BIDDING DOCUMENTS CAREFULLY AND NOT LATER THAN SEVEN (7) DAYS PRIOR TO THE DATE OF RECEIPT AND SHALL MAKE WRITTEN REQUEST TO ARCHITECT AND/OR ENGINEER FOR INTERPRETATION OR CORRECTION OF ANY DISCREPANCIES, AMBIGUITY, INCONSISTENCY OR ERROR THEREIN WHICH HE/SHE MAY DISCOVER. ANY INTERPRETATION OR CORRECTION WILL BE ISSUED AS AN ADDENDUM BY THE ARCHITECT AND/OR ENGINEER. ONLY A WRITTEN INTERPRETATION OR CORRECTION BY ADDENDUM SHALL BE BINDING. NO BIDDER SHALL RELY UPON INTERPRETATIONS OR CORRECTIONS GIVEN BY ANY OTHER METHOD. IF DISCREPANCIES, AMBIGUITY, INCONSISTENCY OR ERROR ARE NOT COVERED BY ADDENDUM OR WRITTEN DIRECTIVE, CONTRACTOR SHALL INCLUDE HIS / HER BID, LABOR MATERIALS AND METHODS OF CONSTRUCTION RESULTING IN HIGHER COST. AFTER AWARD OF CONTRACT, NO ALLOWANCE OF EXTRA COMPENSATION WILL BE MADE IN BEHALF OF THE CONTRACTOR DUE TO HIS / HER FAILURE TO MAKE THE WRITTEN REQUESTS AS DESCRIBED ABOVE.
  - 11.2 THE COMPANY / CONTRACTOR SUBMITTING THE REQUEST WILL BE RESPONSIBLE FOR ITS PROMPT DELIVERY. FAILURE TO REQUEST CLARIFICATION OF ANY INADEQUACY, OMISSION OR CONFLICT WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY. THE SIGNING OF THE CONTRACT WILL BE CONSIDERED IMPLICITLY DENOTING THAT THE CONTRACTOR HAS THOROUGH COMPREHENSION OF THE FULL INTENT AND SCOPE OF THE WORKING DRAWINGS AND SPECIFICATIONS.
- 12. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT AND/OR ENGINEER.
- 13. GUARANTEE THE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY OCCUR DURING NORMAL USAGE FOR A PERIOD OF ONE (1) YEAR AFTER OWNERS ACCEPTANCE. DEFECTS SHALL BE PROMPTLY REMEDIED WITHOUT COST TO OWNER.
- 14. SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO OWNER.
- 15. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING PROVIDED UNDER THIS SECTION OR FACTORY WIRING IN EQUIPMENT PROVIDED UNDER THIS SECTION.
- 16. SYSTEMS SHALL BE COMPLETE, OPERABLE AND READY FOR CONTINUOUS OPERATIONS. LIGHTS, SWITCHES, RECEPTACLES, MOTORS, ETC. SHALL BE CONNECTED AND OPERABLE.
- 17. ALL ELECTRICAL SYSTEM COMPONENTS SHALL BE LISTED OR LABELED BY U.L. OR OTHER NATIONALLY RECOGNIZED TESTING LABORATORIES (NTRL).
- B. EXISTING CONDITIONS
  - 1. THE PROJECT INVOLVES CONSTRUCTION INSIDE AN EXISTING STRUCTURE. CONTRACTORS BY SUBMITTING A BID ARE DEEMED TO BE COMPLETELY FAMILIAR WITH THE EXISTING CONDITIONS OF THE BUILDING AS IT INFLUENCES THE WORK DESCRIBED. NO CLAIMS FOR EXTRA COMPENSATION SHALL BE CONSIDERED FOR EXISTING CONDITIONS VISIBLE OR REASONABLY INFERRABLE FROM A CAREFUL EXAMINATION OF THE EXISTING BUILDING CONDITIONS.
  - 2. CONTRACTOR SHALL INSPECT THE EXISTING FIELD CONDITIONS AT THE SITE AND THE CONTRACT DOCUMENTS PRIOR TO THE START OF ANY WORK TO DETERMINE WHAT EFFECT THE EXISTING CONDITIONS WILL HAVE ON THE WORK. CONTRACTOR SHALL REPORT DISCREPANCIES TO THE ARCHITECT AND/OR ENGINEER AND INCLUDE IN HIS / HER BID ALL COSTS REQUIRED TO MAKE HIS / HER WORK MEET EXISTING CONDITIONS.
  - 3. CONTRACTOR SHALL CONNECT THEIR WORK TO VARIOUS EXISTING ELECTRICAL SYSTEMS. THE NEW WORK SHALL BE COMPATIBLE WITH EXISTING SYSTEM CONDITIONS.
  - 4. CARE SHALL BE TAKE DURING INSTALLATION OF THE NEW WORK, AS TO NOT DAMAGE OR INTERRUPT THE EXISTING BUILDING SYSTEMS AND SERVICES INSTALLED. DAMAGE TO EXISTING SYSTEMS AND EQUIPMENT CAUSED BY CONTRACTOR DURING THE INSTALLATION OF THEIR WORK SHALL BE REPAIRED AND/OR REPLACED AT THE CONTRACTORS EXPENSE TO THE SATISFACTION OF THE BUILDING OWNER.
  - 5. SHUT-DOWN OF EXISTING SYSTEMS FOR CONNECTION TO THE EXISTING SERVICES SHALL BE COORDINATED WITH THE OWNER. CONTRACTOR SHALL SUBMIT REQUEST WHERE THEY AFFECT THE OPERATION OF THE BUILDING SYSTEMS AT LEAST ONE (1) WEEK IN ADVANCE OF ANY REQUIRED SHUT-DOWN. THE ACTUAL SHUT-DOWN PERIOD SHALL BE AS SHORT AS POSSIBLE AND AT A TIME AGREED BY THE OWNER.
  - 6. DEMOLITION SHALL BE COORDINATED WITH OWNER, ARCHITECT AND GENERAL CONTRACTOR.
  - 7. CONTRACTOR SHALL REPORT ANY EQUIPMENT DISCREPANCIES FOUND TO THE ARCHITECT AND/OR ENGINEER WITHIN FIVE (5) DAYS OF DISCOVERY.
  - 8. CONTRACTOR SHALL REPORT DISCREPANCIES TO THE ARCHITECT AND/OR ENGINEER AND INCLUDE IN HIS/HER BID ALL COSTS REQUIRED TO MAKE HIS/HER WORK MEET EXISTING CONDITIONS.
  - 9. PROVIDE ELECTRICAL DEMOLITION REQUIRED; REFER TO ARCHITECTURAL DEMOLITION DRAWINGS FOR LOCATION AND EXTENT OF DEMOLITION WORK REQUIRED. CONTRACTOR SHALL VISIT SITE PRIOR TO BID TO DETERMINE EXTENT OF WORK INVOLVED. PROVIDE LABOR AND MATERIALS AS REQUIRED TO MAINTAIN AND/OR RESTORE CONTINUITY OF SERVICE TO EXISTING CIRCUITS.
  - 10. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXISTING EQUIPMENT OR CIRCUITS THAT ARE REMAINING TO BE RE-CONNECTED TO NEW OR EXISTING SWITCHBOARDS / PANELBOARDS. PROVIDE SWITCHES, RECEPTACLES, CONDUIT, WIRE, ETC. AS REQUIRED TO RESTORE CONTINUITY OF CIRCUIT(S).
  - 11. CONTRACTOR SHALL PROVIDE NECESSARY DEMOLITION TO REMOVE EXISTING UNUSED CONDUIT, WIRE, CABLE, JUNCTION BOXES, RECEPTACLES, SWITCHES, LIGHTS, FIRE ALARM DEVICES, ETC. COMPLETE WITH ASSOCIATED CIRCUIT TO SOURCE.
  - 12. IMMEDIATELY AFTER AWARD OF CONTRACT, CONTRACTOR SHALL VERIFY AVAILABLE PHYSICAL SPACE AND AMPACITIES OF EXISTING PANELBOARDS, SWITCHBOARDS, DISTRIBUTION BOARDS, MOTOR CONTROL CENTERS, ETC. AND PROVIDE WRITTEN DOCUMENTATION OF FINDINGS TO THE ENGINEER. DOCUMENTATION SHALL INCLUDE A MINIMUM 72 HOUR LOAD RECORDING AMPERE READING ON ALL EXISTING SWITCHGEAR BEING UTILIZED FOR THIS PROJECT.
  - 13. EXISTING LIGHT FIXTURES, SWITCHGEAR, ELECTRICAL EQUIPMENT, ETC. BEING REMOVED SHALL BE RETURNED TO THE OWNER, EXCEPT FOR THOSE ITEMS BEING RELOCATED.

**C. SUBMITTALS**

- 1. CONTRACTOR SHALL SUBMIT ELECTRONIC FORMAT OF SHOP DRAWINGS AND TECHNICAL DATA SHEETS FOR EQUIPMENT AND MATERIALS SPECIFIED. THE ENGINEER SHALL REVIEW SHOP DRAWINGS AND TECHNICAL DATA SHEETS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WILL ISSUE A WRITTEN ASSESSMENT TO THE OWNER PRIOR TO COMMENCEMENT OF WORK.
- 2. CONTRACTOR SHALL IDENTIFY DEVIATIONS IN SHOP DRAWINGS FROM THE DESIGN DOCUMENTS.
- 3. SUBSTITUTIONS SHALL BE SUBMITTED TO THE ARCHITECT AND/OR ENGINEER FOR CONSIDERATION PRIOR TO BIDDING. SUBSTITUTIONS SHALL BE PRE-APPROVED IN WRITING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING REQUIREMENTS ASSOCIATED WITH THE SUBSTITUTED EQUIPMENT OR MATERIALS WITH OTHER BUILDING TRADES INCLUDING MECHANICAL, STRUCTURAL, AND ARCHITECTURAL ELEMENTS. CONTRACTOR SHALL IDENTIFY AND ANNOTATE REVISED REQUIREMENTS PER BUILDING TRADE ON SHOP DRAWINGS. CONTRACTOR SHALL ALSO IDENTIFY COST DEBITS OR CREDITS IN WRITING FOR THE PROPOSED CHANGES PRE BUILDING TRADE.
- 4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ENGINEERING FEES NECESSARY TO CHANGE PERMIT DOCUMENTS BASED ON ALTERNATE SUBMITTAL PACKAGES / EQUIPMENT SUBSTITUTIONS.
- 5. PROVIDE ELECTRONIC FORMAT OF SHOP DRAWING SUBMITTAL WITH 1/4" SCALE LAYOUT DRAWINGS OF ROOMS WITH ELECTRICAL EQUIPMENT AND TRANSFORMERS. LAYOUT SHALL SHOW LOCATIONS OF AND SHALL BE COORDINATED WITH MECHANICAL EQUIPMENT AND SHALL BE DRAWN TO SCALE. ALTHOUGH MORE THAN ONE EQUIPMENT MANUFACTURER IS LISTED FOR USE ON THIS PROJECT, IF THAT MANUFACTURER CANNOT MEET THE PHYSICAL CONSTRAINTS OF THIS PROJECT, THEIR EQUIPMENT IN TOTAL IS NOT ACCEPTABLE. DRAWINGS SHALL INDICATE BY DIMENSION THAT CLEARANCE REQUIRED BY CODE ARE PROVIDED.
- 6. PRESENT SHOP DRAWING SUBMITTAL DATA AT ONE TIME, IN ELECTRONIC FORMAT. PARTIAL SUBMITTALS WILL NOT BE ACCEPTED. SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO: LIGHTING FIXTURES, SWITCHGEAR, PANELBOARDS, WIRING DEVICES, DISCONNECT SWITCHES, FUSES, MOTOR STARTERS, LAMPS, CONDUIT FITTINGS AND TRANSFORMERS.
- 7. THE CONTRACTOR SHALL INSTALL ALL CONDUITS AND WIRES WITH A MINIMUM NUMBER OF BENDS AND IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE. AVOID OBSTRUCTIONS, PRESERVE HEAD ROOM, KEEP OPENINGS AND PASSAGEWAYS CLEAR AND MEET ALL STRUCTURAL CODE REQUIREMENTS.

**D. DRAWINGS**

- 1. CONTRACTOR SHALL MAINTAIN TWO (2) SETS OF WHITE PRINTS OR DRAWINGS PERTAINING TO THE WORK, ONE (1) SET OF PRINTS SHALL BE KEPT ON SITE AND CHANGES OR DEVIATIONS FROM THE CONTRACT DRAWINGS SHALL BE CAREFULLY NOTED AS CHANGES OR DEVIATIONS ARE MADE. AT THE COMPLETION OF THE PROJECT AND BEFORE FINAL ACCEPTANCE TESTING OF THE WORK, COPY THE CHANGES, DEVIATIONS, AND COMPLIMENTARY INFORMATION ON THE OTHER SET OF PRINTS AND RETURN IT TO THE OWNER. THE COST OF PRINTS AND COST INVOLVED IN THE PREPARATION OF THESE RECORD DRAWINGS SHALL BE BORNE BY THE CONTRACTOR.

**E. OPERATING AND MAINTENANCE INSTRUCTIONS**

- 1. CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF MANUFACTURERS OPERATING AND MAINTENANCE INSTRUCTIONS FOR EACH PIECE OF EQUIPMENT AND SYSTEM. COPIES SHALL BE COMPILED IN SETS AND PLACED IN A HARD COVER THREE RING BINDER WITH INDEX PAGE AND INDEX TABS. ALL NAME TAG INFORMATION SUCH AS MANUFACTURER, TYPE, SIZE, CAPACITY, SERIAL NUMBER, ETC. SHALL BE INCLUDED AS PART OF THIS MANUAL.
- 2. PROVIDE WRITTEN OPERATING INSTRUCTIONS WITH DIAGRAMS FOR ELECTRICAL EQUIPMENT.
- 3. OPERATING & MAINTENANCE (O&M) MANUALS SHALL BE SUBMITTED TO ARCHITECT FOR REVIEW.

**PART 2- PRODUCTS**

**A. GENERAL**

- 1. PROVIDE EQUIPMENT AS SPECIFIED AND/OR SCHEDULED AND IN ACCORDANCE WITH MANUFACTURERS PUBLISHED INSTALLATION INSTRUCTIONS. EQUIPMENT SHALL OPERATE ACCORDING TO THE MANUFACTURERS "OWNER'S OPERATING AND MAINTENANCE MANUAL" TROUBLE-FREE.
- B. WIRE & CABLE
  - 1. WIRE SHALL BE COPPER (CU), 75° RATED FOR GENERAL USE.
    - 600V STABLOY 8030 SERIES ALUMINUM WIRE AND CABLE (OR EQUIVALENT) IN SIZES #1/0 AND LARGER MAY BE SUBSTITUTED FOR COPPER ON SERVICES AND FEEDERS IF AMPACITY IS EQUAL TO OR GREATER THAN COPPER AND VOLTAGE DROP IS EQUAL TO OR LESS THAN COPPER. THIS WOULD ONLY BE APPLICABLE FOR FACILITIES THAT ACCEPT THE USE OF ALUMINUM CONDUCTORS. THE USE OF ALUMINUM CONDUCTORS SHALL BE COORDINATED WITH FACILITIES ENGINEER AND/OR BUILDING OWNER PRIOR TO SUBMITTING.
    - STEEL TYPE METAL CLAD (MC) CABLE MAY BE USED FOR BRANCH CIRCUITS #8AWG OR SMALLER, WHERE PERMITTED BY CODE.
    - UNLESS NOTED OTHERWISE, ALL WIRE SHALL BE STRANDED COPPER. ALL WIRE SHALL BE UL LISTED, RATED FOR 600 VOLTS, TYPE THHN/THWN INSULATION, NO. 12 MINIMUM SIZE EXCEPT FOR CONTROLS.

**C. RACEWAYS & FITTINGS**

- 1. ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC RACEWAYS. RACEWAYS IN SLAB-ON-GRADE OR BELOW SHALL BE SCHEDULE 40 PVC. TRANSITIONS FROM BELOW TO ABOVE GRADE SHALL BE WITH RIGID STEEL ELBOWS WITH PVC JACKET OR APPROVED EQUIVALENT PROTECTION. EMT FITTINGS SHALL BE STEEL. CONNECTORS SHALL BE INSULATED THROAT TYPE.
- 2. RACEWAYS IN SLAB-ON-GRADE OR BELOW CONTAINING SERVICE ENTRANCE FEEDERS OR DISTRIBUTION FEEDERS 600V SHALL BE SCHEDULE 80 PVC, CONCRETE ENCASED.
- 3. ALL EXPOSED CONDUITS SHALL BE RIGID METAL CONDUIT (RMC).
- 4. ALL CONDUIT FITTINGS SHALL BE COMPRESSION TYPE FITTINGS. NO SET-SCREW FITTINGS ARE ACCEPTABLE.
- 5. ALL CONDUIT SHALL BE MINIMUM 3/4".

**D. DISTRIBUTION EQUIPMENT**

- 1. SWITCHBOARDS, DISTRIBUTION BOARDS, PANELBOARDS, DISCONNECT SWITCHES, MOTOR CONTROL CENTERS, ETC. SHALL BE MANUFACTURED BY EATON CUTLER-HAMMER, GENERAL ELECTRIC (GE), SIEMENS OR SCHNEIDER ELECTRIC (SQUARE D). CUSTOM EQUIPMENT SHALL BE MANUFACTURED BY INDUSTRIAL ELECTRIC MFG. (IEM). BOLT FREE-STANDING EQUIPMENT TO 4" HIGH CONCRETE HOUSEKEEPING PADS.
- 2. DRY-TYPE TRANSFORMERS SHALL BE 115° RISE WITH 220" INSULATION MINIMUM WITH COPPER WINDINGS. MOUNT ON RUBBER-IN-SHEAR ISOLATORS. MANUFACTURERS SHALL BE BY EATON CUTLER-HAMMER, GENERAL ELECTRIC (GE), SIEMENS OR SCHNEIDER ELECTRIC (SQUARE D). CUSTOM EQUIPMENT SHALL BE MANUFACTURED BY INDUSTRIAL ELECTRIC MFG. (IEM). BOLT FREE-STANDING EQUIPMENT TO 4" HIGH CONCRETE HOUSEKEEPING PADS.
- 3. PROVIDE ENGRAVED NAMEPLATES ON SWITCHBOARDS, PANELBOARDS, DISCONNECT SWITCHES, MOTOR CONTROL CENTERS, TRANSFORMERS, ETC. INDICATING EQUIPMENT DESIGNATION AND POWER SOURCE OF WHERE IT IS FED FROM (OR DESIGNATION OF EQUIPMENT SERVED) AND VOLTAGE. EXAMPLE: PANEL HP-1, FED FROM SWITCHBOARD MSA, CIRCUITS 1,3,5,480/277V, 3PH, 4W.
- 4. DISCONNECT SWITCHES SHALL BE SINGLE-THROW, HEAVY-DUTY TYPE. FUSIBLE SWITCHES SHALL ACCEPT CLASS 'R' FUSES ONLY AND REJECT OTHERS. INSTALL DISCONNECT SWITCH ON TWO (2)-24" LONG UNI-STRT CHANNELS DRILLED AND BOLTED TO HVAC UNIT FRAME WHERE POSSIBLE. (COORDINATE LOCATION WITH HVAC MANUFACTURER TO AVOID ANY WARRANTY INFRACTIONS AND UL LISTINGS). SILICONE SEAL ALL PENETRATIONS INTO UNIT.
- 5. CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE AND FUSES SHALL BE BUSSMAN OR APPROVED EQUIVALENT.
- 6. WIRE TERMINATION PROVISIONS FOR PANELBOARDS, CIRCUIT BREAKERS, DISCONNECT SWITCHES AND ALL OTHER ELECTRICAL APPARATUS SHALL BE LISTED SUITABLE FOR 75°C.
- 7. ALL EQUIPMENT SUCH AS SWITCHBOARDS, DISTRIBUTION BOARDS, DISCONNECT SWITCHES, TRANSFORMERS AND PANELBOARDS SHALL BE BY THE SAME MANUFACTURER. ALL FUSES PROVIDED SHALL BE BUSSMAN.
- 8. PROVIDE HANDLE-TIES OR MULTI-POLE CIRCUIT BREAKERS FOR SIMULTANEOUS OPERATION OF ALL MULTI-WIRE BRANCH CIRCUITS.
- 9. PROVIDE ARC FLASH LABELING ON ALL NEW DISTRIBUTION EQUIPMENT. UPDATE EXISTING ARC FLASH STUDY IF ADDING NEW EQUIPMENT (I.E. PANELBOARDS, TRANSFORMERS) TO EXISTING ELECTRICAL DISTRIBUTION SYSTEM AS REQUIRED. COORDINATE WITH FACILITIES ELECTRICAL ENGINEER AND/OR BUILDING OWNER FOR ADDITIONAL REQUIREMENTS.

**E. WIRING DEVICES**

- 1. WIRING DEVICES SHALL BE SPECIFICATION GRADE AND RATED AT 20 AMPERES. THE DEVICE PLATES SHALL BE LEXAN OR NYLON (IN KITCHENS WITH STAINLESS STEEL COUNTERS, DEVICE PLATES SHALL BE STAINLESS STEEL). THE COLOR OF THE DEVICES AND COVER PLATES SHALL BE AS DIRECTED BY THE ARCHITECT.

**F. BOXES**

- 1. PULL-BOXES, CABINETS, ETC. MOUNTED ON THE EXTERIOR AT GRADE LEVEL, SHALL BE WEATHER-PROOF TYPE WITH HINGED, LOCKABLE COVERS SECURED WITH TAMPER-PROOF SCREWS.
- 2. JUNCTION BOXES SHALL BE SIZED PER NATIONAL ELECTRICAL CODE (NEC), ARTICLE 314-OUTLET, DEVICE, PULL AND JUNCTION BOXES; CONDUIT BODIES, FITTINGS AND HAND-HOLE ENCLOSURES. REFERENCE NEC, ARTICLE 314, TABLE 314.16(A).
- 3. BOXES SHALL BE MINIMUM 4" SQUARE WITH REQUIRED EXTENSIONS AND PLASTER OR TILE RINGS.
- 4. COMBINATION POWER & DATA RECESSED FLOOR BOXES (FIB) SHALL BE HUBBELL SYSTEME SERIES, 2-GANG, WITH 1" C. AND 2" C. KNOCK-OUTS FOR POWER AND DATA, RESPECTIVELY. PROVIDE HUBBELL SYSTEMONE 2-GANG FLOOR BOX, CFB2G30R SERIES WITH CFBHUB2 AND FLUSH-SURFACE ROUND COVER, CATALOG NO. CFB2G30R (FLOOR-BOX) WITH FLUSH SURFACE-ROUND COVER, CATALOG NO. CFBSP16CVRBLK BLACK POWDER-COATED ROUND COVER). COORDINATE FINISHES WITH ARCHITECT PRIOR TO PURCHASE.
- 5. COMBINATION POWER & DATA POKE-THROUGH DEVICES SHALL BE HUBBELL SYSTEME SERIES, WITH 3/4" C. AND 1-1/2" C. KNOCK-OUTS FOR POWER AND DATA/COMMUNICATION DEVICES, RESPECTIVELY. PROVIDE HUBBELL SYSTEMONE, 4" CORE POKE-THROUGH DEVICE, CATALOG NO. S1P131MBLJ (BLACK FINISH WITH JUNCTION BOX), COORDINATE FINISHES WITH ARCHITECT.

**G. LIGHT FIXTURES**

- 1. RECESSED FIXTURES INSTALLED INDOORS SHALL BE THERMALLY PROTECTED.
- 2. FIXTURES INDICATED AS BEING EMERGENCY SHALL BE PROVIDED WITH BATTERY POWERED INVERTER UNIT FOR MOUNTING IN, ON OR ADJACENT TO FIXTURE. PROVIDE UNIT WITH FULLY AUTOMATIC TWO RATE CHARGER, NICKEL CADMIUM BATTERY, AC 'ON' PILOT LIGHT, AND TEST SWITCH. DESIGN AND WIRE UNIT TO AUTOMATICALLY TRANSFER TO BATTERY SUPPLY ON LOSS OF NORMAL AC POWER AND TO OPERATE AT 1300 LUMENS MINIMUM FOR RECESSED FIXTURES AND MINIMUM 700 LUMENS FOR RECESSED DOWNLIGHTS.

**H. FIRE ALARM (ONLY APPLICABLE IF FIRE ALARM SCHEME EXISTS FOR PROJECT)**

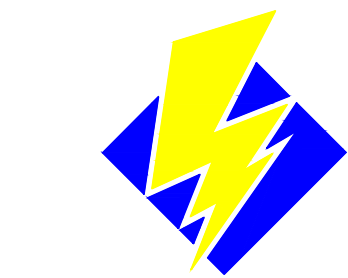
- 1. FIRE ALARM SYSTEM. CONTRACTOR SHALL PROVIDE DEVICES, CONDUITS, WIRES, CABLE, PROGRAMMING AND TESTING AS DIRECTED BY EQUIPMENT MANUFACTURER AND FIRE DEPARTMENT FOR A CODE COMPLIANT FIRE ALARM SYSTEM. MATERIALS, EQUIPMENT AND WORKMANSHIP SHALL BE COMPLETE AND OPERABLE IN EVERY RESPECT. SUBMIT SINGLE LINE OF SYSTEM WITH SHOP DRAWINGS. THIS SINGLE LINE DIAGRAM SHALL SHOW DEVICES, CONDUIT, WIRE, CABLE SIZES AND BATTERY CALCULATIONS TO BE USED AND SHALL BE STAMPED AND SIGNED BY LOCAL FIRE DEPARTMENT. SYSTEM CALIBRATION AND TESTING SHALL BE BY FACTORY CERTIFIED TECHNICIAN, SUBMIT TO ENGINEER PRIOR TO SUBMITTAL TO FIRE ALARM DEPARTMENT.
- 2. DUCT DETECTORS (WHERE REQUIRED OR WHEN GREATER THAN 2000CFM SUPPLIED BY AN HVAC EQUIPMENT) SHALL BE PHOTOELECTRIC TYPE FURNISHED BY ELECTRICAL CONTRACTOR, INSTALLED IN THE SUPPLY DUCTS BY MECHANICAL CONTRACTOR AND CONNECTED TO FIRE ALARM SYSTEM BY DIVISION 26-ELECTRICAL. DUCT DETECTOR SHALL BE CONNECTED TO SHUT-OFF AIR HANDLING UNITS LOCATED WITHIN THE SAME PLENUM. DUCT DETECTORS SHALL NOT BE MOUNTED IN AN ENVIRONMENT WHICH EXCEEDS 122° F PROVIDE ZERO VELOCITY TYPE DETECTORS WHERE REQUIRED. INSTALLATION SHALL BE COORDINATED WITH MECHANICAL CONTRACTOR TO MAINTAIN AIR FLOW AND ACCESS.
- 3. ALL FIRE ALARM CONDUIT SHALL BE 3/4" MINIMUM AND FACTORY-PAINTED RED.

**PART 3-EXECUTION**

**A. GENERAL**

- 1. FINAL CONNECTIONS AND ROUGH-IN REQUIREMENTS TO EQUIPMENT SHALL BE PER MANUFACTURERS APPROVED WIRING DIAGRAMS, DETAILS AND INSTRUCTIONS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED INCLUDING RACEWAYS, BOXES, WIRING, WIRING DEVICES, ETC.
- 2. CONTRACTOR TO PROVIDE CONTROLS, INTER-LOCKS, ACCESSORIES AS REQUIRED FOR MOTOR CONTROL. EACH STARTER SHALL CONTAIN 120V CONTROL TRANSFORMER, PILOT LIGHT, PUSH-BUTTONS, OR SELECTOR SWITCH AS REQUIRED. IN ADDITION TO THE OTHER ITEMS, (AUXILIARY CONTACTS, DOOR SWITCHES, RELAYS, ETC.) REQUIRED, REFER TO CONTROL DRAWINGS AND CONTROL DIAGRAMS FOR ADDITIONAL CONDUIT, WIRE, RELAYS, TRANSFORMERS, CONNECTIONS, ETC. REQUIRED FOR A COMPLETED AND OPERABLE SYSTEM.
- 3. ALL CONTROLS CONDUIT SHALL BE 3/4" MINIMUM AND FACTORY-PAINTED BLUE.
- 4. EMPTY RACEWAY SYSTEMS SHALL HAVE A #12 PULL-WIRE OR EQUAL AND SHALL BE IDENTIFIED AT JUNCTION, PULL AND TERMINATION POINTS, USING PERMANENT METALLIC TAGS. TAG SHALL INDICATED INTENDED USE OF CONDUIT. STUB CONDUIT OUT 6" IN AN ACCESSIBLE AREA. CAP OPEN ENDS NOT TERMINATED TO A JUNCTION BOX.
- 5. SPLICES IN EXTERIOR PULL-BOXES AND MAN-HOLES SHALL BE MADE WEATHER-PROOF USING "SCOTCHCAST" SPICE KIT OR APPROVED EQUAL. SEAL ALL ENDS OF CONDUITS AND DUCTS WITH "DUCTSEAL" OR APPROVED EQUAL.
- 6. RECEPTACLES WHICH ARE SHOWN WALL-MOUNTED ON THE ELECTRICAL DRAWINGS ON WALLS WHICH, ON THE ARCHITECTURAL DRAWINGS AND ELEVATIONS ARE SHOWN AS GLASS OR PARTITIONS, SHALL BE FLUSHED FLOOR DUPLEX RECEPTACLES MOUNTED ADJACENT TO BASE OR WALLS. COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF ALL OUTLETS & DEVICES WITH ARCHITECTURAL.
- 7. VERIFY EXACT LOCATIONS OF EXISTING AND NEW UNDERGROUND UTILITIES, PIPING AND RACEWAYS SYSTEMS PRIOR TO TRENCHING. PROVIDE NECESSARY TRENCHING, BACK-FILL, EXCAVATION, SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULL-BOXES, TRANSFORMER PADS, SAW-CUTTING AND PATCHING, CONCRETE / PAVING, ETC., REQUIRED, BACK-FILL TRENCHES TO 90% COMPACTION AND PATCH TO MATCH EXISTING. CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS.
- 8. PROVIDE SEPARATE NEUTRAL CONDUCTOR FOR EACH ARC-FAULT, GROUND-FAULT OR DIMMING CIRCUIT.
- 9. FOR ALL NON-MULTI-WIRE BRANCH CIRCUITS, PROVIDE SEPARATE NEUTRAL CONDUCTOR.
- 10. PROVIDE MAINTENANCE RECEPTACLE WITHIN 25'-0" OF MECHANICAL OR MOTORIZED EQUIPMENT. RECEPTACLE INSTALLED AT EXTERIOR SHALL BE NEC ARTICLE 408 COMPLIANT, 120V, 20A-RATED GFI RECEPTACLE INSIDE A WEATHER-PROOF ENCLOSURE, TAYMAC (HUBBELL), SINGLE GANG, IN-USE COVER COMBO, CATALOG NO. MG410C-20A
- 11. RECESSED LIGHT FIXTURES INSTALLED IN GYPSUM BOARD OR PLASTER CEILINGS SHALL HAVE PLASTER FRAMES INSTALLED PRIOR TO CEILING MATERIAL.
- 12. RECESSED LIGHT FIXTURES INSTALLED IN 'T-BAR' TYPE CEILINGS SHALL BE SUPPORTED INDEPENDENTLY OF CEILING SYSTEM WITH 2 #12 HANGER WIRES UP TO STRUCTURE. SECURE HANGER WIRES TO CORNERS OF FIXTURE. CLIP FIXTURE TO GRID ON TWO SIDES WITH FACTORY-FURNISHED CLIPS. FINAL CONNECTION TO FIXTURE SHALL BE MADE WITH A FLEXIBLE U.L. APPROVED ASSEMBLY.
- 13. REFER TO DIVISION 23-MECHANICAL, DRAWINGS FOR LOCATION OF MECHANICAL EQUIPMENT. PROVIDE SERVICE TO AND CONNECT EQUIPMENT AS REQUIRED. PROVIDE FUSES OR HACR-TYPE CIRCUIT BREAKERS FOR HVAC EQUIPMENT SIZED IN ACCORDANCE TO THE MANUFACTURERS NAMEPLATE.
- 14. PANEL DIRECTORIES SHALL BE REMOVABLE ROOM NAMES AND NUMBERS SHALL BE AS DIRECTED BY OWNER. DIRECTORIES SHALL BE TYPED AND INSTALLED UNDER CLEAR PLASTIC COVERS.
- 15. PROVIDE DYMO-TAPE TAG RATHER LABEL INSIDE COVER OF EACH FUSIBLE SWITCH INDICATED SIZE AND TYPE OF FUSES PROVIDED.
- 16. PROVIDE TWO (2) SETS OF THREE (3) FUSES FOR EACH SIZE AND TYPE PROVIDED ON THIS PROJECT. INSTALL FUSES IN A HINGED DOOR, SHEET METAL STORAGE CABINET EQUIPPED WITH CLIPS OR CUBICLES, EACH MARKED WITH THE SIZE AND TYPE FUSE STORED THEREIN. PROVIDE NAMEPLATE "SPARE FUSES", INSTALL IN LOCATIONS DIRECTED BY OWNER.
- 17. PROVIDE 4" HIGH CONCRETE EQUIPMENT PADS FOR FLOOR-MOUNTED EQUIPMENT SUCH AS SWITCHBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, ETC. COORDINATE WITH DISTRIBUTION EQUIPMENT TO ENSURE ALL SWITCH AND CIRCUIT BREAKER HANDLES ARE BELOW 6'-6" (+ 78" AFF) TO HIGHEST POINT.
- 18. CONTRACTOR SHALL PROVIDE NEW UPDATED PANELBOARD DIRECTORIES FOR EXISTING AND NEW CIRCUITS BEING UTILIZED FOR COMPLETION OF PROJECT.
- 19. FIRE ALARM, SOUND, TELEPHONE, COMPUTER AND SIMILAR SYSTEMS CONDUITS LARGER THAN 1" SHALL HAVE LONG RADIUS SWEEPS (10 TIMES INTERNAL DIAMETER) AND CONDUITS 2" OR LESS SHALL HAVE RADIUS SWEEP OF 6 TIMES INTERNAL DIAMETER.
- 20. CONDUITS PENETRATING THROUGH ROOF SHALL HAVE ROOF FLASHING WITH CAULK TYPE COUNTER FLASHING SLEEVE. INSTALLATION SHALL BE WATER-TIGHT.

- 21. FINAL CONNECTIONS TO MOTORS, TRANSFORMERS AND OTHER VIBRATING EQUIPMENT SHALL BE WITH SEAL-TITE FLEX (6'-0" MAXIMUM LENGTH) AND APPROVED FITTINGS. DO NOT SECURE CONDUITS OR DEVICES TO DUCTWORK OR MECHANICAL EQUIPMENT.
- 22. WHERE PANELS ARE INSTALLED FLUSH WITH WALLS, EMPTY CONDUITS SHALL BE EXTENDED FROM PANEL TO ACCESSIBLE SPACE ABOVE OR BELOW. A MINIMUM OF ONE (1)-3/4" C. SHALL BE INSTALLED FOR EVERY THREE (3) SINGLE POLE SPARE CIRCUIT BREAKERS OR SPACES, OR FRACTION THEREOF, BUT NOT LESS THAN TWO (2) CONDUITS.
- 23. DEVICES INSTALLED IN FIRE-RATED WALLS SHALL HAVE NELSON FSP PUTTY PADS INSTALLED TO MAINTAIN FIRE-INTEGRITY. ONE PAD PER HOUR OF RATING. CONDUIT PENETRATING FIRE-RATED WALLS SHOULD COMPLY WITH THE REQUIREMENTS OF UL SYSTEM 147A FOR SINGLE CONDUITS AND SYSTEM 322 FOR MULTIPLE CONDUITS. DEVICES INSTALLED IN SOUND RATED WALLS SHALL HAVE NELSON FSB (STC 54) SOUND RATED PUTTY PADS INSTALLED TO MAINTAIN THE SOUND INTEGRITY OF THE WALL.
- 24. RECEPTACLES INSTALLED OUTSIDE, ON THE BUILDING EXTERIOR OR ROOF, IN KITCHENS OR WITHIN 6 FEET HORIZONTALLY FROM A SINK OR DRINKING FOUNTAIN UNLESS LOCATED BELOW A COUNTER OR OTHERWISE PROTECTED. SHALL BE GFCI TYPE OR PROTECTED BY A GFI CIRCUIT BREAKER.
- 25. COORDINATE THE LOCATION OF ALL LIGHTING FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLAN. UNLESS OTHERWISE VERIFIED IN WRITING, THE REFLECTED CEILING PLAN LOCATION SHALL GOVERN.
- 26. COORDINATE THE LOCATION OF WALL-MOUNTED EQUIPMENT WITH THE ARCHITECTURAL INTERIOR / EXTERIOR ELEVATIONS. UNLESS OTHERWISE VERIFIED IN WRITING THE ARCHITECTURAL DRAWINGS SHALL GOVERN.
- 27. EQUIPMENT ANCHORAGE
  - ALL ELECTRICAL EQUIPMENT SHALL BE ANCHORED OR BRACE TO MEET THE HORIZONTAL AND VERTICAL FORCES PRESCRIBED IN THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE (CBC), SECTIONS 1615A.1.20, 1615A.1.21 AND 1615A.1.22 AND ASCE 7-05 SECTIONS 13.3, 13.4, 13.6 AND CHAPTER 6.
  - THE ATTACHMENT OF THE FOLLOWING ITEMS SHALL BE DESIGNED TO RESIST THE FORCES PRESCRIBED ABOVE, BUT NEED NOT DETAILED ON THE PLANS, AND THE PROJECT INSPECTOR WILL VERIFY THAT THESE ITEMS (EQUIPMENT) HAVE BEEN PROPERLY ANCHORED:
    - A. EQUIPMENT WEIGHING LESS THAN 400 POUNDS SUPPORTED DIRECTLY ON THE FLOOR OR ROOF.
    - B. FURNITURE REQUIRED TO BE ATTACHED IN ACCORDANCE WITH ASCE 7-05, SECTION 13.5.
    - C. TEMPORARY AND MOVEABLE EQUIPMENT WITH FLEXIBLE CONNECTION TO POWER OR UTILITIES.
    - D. EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUPPORTED BY VIBRATION ISOLATORS.
    - E. EQUIPMENT WEIGHTING LESS THAN 20 POUNDS SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.
  - FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAIL ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE MECHANICAL / ELECTRICAL ENGINEER.
- 28. ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE
  - ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO RESIST THE FORCES PRESCRIBED IN ASCE 7-05, SECTION 13.3 AS DEFINED IN ASCE 7-05 SECTION 13.6.8, 13.6.7, 13.6.5 ITEM 6 AND THE LATEST EDITION OF THE CBC, SECTIONS 1615A.1.20, 1615A.1.21 AND 1615A.1.22.
  - COPIES OF THE MANUAL SHALL BE AVAILABLE ON THE JOB-SITE PRIOR TO THE START OF HANGING AND BRACING THE PIPE, DUCTWORK AND ELECTRICAL DISTRIBUTION EQUIPMENT.
  - THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE LOADS ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGAR AND BRACE LOADS.



**PHASE C CONSULTING**  
5538 SAVILLE CIRCLE  
LA PALMA, CA 90623  
562.292.5678  
WWW.PHASE-C.COM

**CLIENT**

**CONSULTANT**

PROJECT LOCATION  
**SOUTH BERKELEY**

C-817G  
2140 SHATTUCK AVE.  
BERKELEY, CA 94704

SHEET TITLE  
**SPECIFICATIONS**

ISSUE FOR PLAN CHECK: 2018\_10\_18

**STAMP**

REGISTERED PROFESSIONAL ENGINEER  
E 21637  
EXP. 09-30-20  
SIGNED 10-18-18  
ELECTRICAL  
STATE OF CALIFORNIA

SHEETS BEARING THIS SEAL AND WET SIGNATURE ARE AUTHENTICATED. RESPONSIBILITY FOR ALL OLDER PLANS, SPECIFICATIONS OR INSTRUMENTS ARE DISCLAIMED.

**REVISIONS**

- △
- △
- △
- △
- △
- △
- △
- △

**DATE**  
2018.10.18  
**PROJECT NUMBER**  
MAE-1801

**SHEET NUMBER**

**EQ.01**



STATE OF CALIFORNIA  
NRCCLTO-E (Created 9/17)  
CALIFORNIA ENERGY COMMISSION

**Outdoor Lighting**  
CERTIFICATE OF COMPLIANCE  
Project Name: SOUTH BERKELEY  
Project Address: 2140 SHATTUCK AVE  
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Date Prepared: 10/18/2018

**G. CUTOFF REQUIREMENTS (BUG)**  
This Section Does Not Apply

**H. OUTDOOR LIGHTING CONTROLS**  
This Section Does Not Apply

**H. OUTDOOR LIGHTING CONTROLS**  
Table Instructions: Complete this table demonstrating compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application. When an option having a "B" is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank. For each requirement in column 02 through 07, do not leave the field blank, instead select NA or Exempt\* from the dropdown list to indicate not applicable or an exemption.

| 01                    | 02                                         | 03                   | 04                        | 05                        | 06                         | 07                                           | 08              | 09   | 10   |
|-----------------------|--------------------------------------------|----------------------|---------------------------|---------------------------|----------------------------|----------------------------------------------|-----------------|------|------|
| Area Description      | Motion Sensor Incandescent-100W (130.2)(a) | Shut-Off (130.2)(c1) | Auto-Schedule (130.2)(c2) | Motion Sensor (130.2)(c3) | Sales Frontage (130.2)(c4) | Facade, Ornament, Outdoor Dining (130.2)(c5) | Field Inspector | Pass | Fail |
| BUILDING FACADE NORTH | NA: No Incand-100W                         | Photocontrol         | Yes                       | See Façade, etc.          | NA: No Sales Front Lig     | Time-switch                                  |                 |      |      |
| BUILDING FACADE SOUTH | NA: No Incand-100W                         | Photocontrol         | Yes                       | See Façade, etc.          | NA: No Sales Front Lig     | Time-switch                                  |                 |      |      |
| BUILDING FACADE EAST  | NA: No Incand-100W                         | Photocontrol         | Yes                       | See Façade, etc.          | NA: No Sales Front Lig     | Time-switch                                  |                 |      |      |
| BUILDING FACADE WEST  | NA: No Incand-100W                         | Photocontrol         | Yes                       | See Façade, etc.          | NA: No Sales Front Lig     | Time-switch                                  |                 |      |      |

**I. LIGHTING POWER ALLOWANCE (per §140.7)**  
This Section Does Not Apply

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2016standards> September 2017

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Project Name: SOUTH BERKELEY  
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**D. EXCEPTIONAL CONDITIONS**  
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form. No exceptional conditions apply to this project.

**E. ADDITIONAL REMARKS**  
This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

**F. OUTDOOR LIGHTING FIXTURE SCHEDULE**  
This Section Does Not Apply

**F. OUTDOOR LIGHTING FIXTURE SCHEDULE**  
Table Instructions: For new or altered lighting systems demonstrating compliance with §140.7 (ie Table I has expanded for input), include all luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application in the Table below. For altered lighting systems using the Existing Power method per §141.00(b)(2) (ie Table N has expanded for input), include only new luminaires being installed and replacement luminaires being installed as part of the project scope (ie, do not include existing luminaires remaining or existing luminaires being moved).

| 01               | 02                             | 03                   | 04                        | 05                      | 06                | 07                     | 08                         | 09                           | 10              |
|------------------|--------------------------------|----------------------|---------------------------|-------------------------|-------------------|------------------------|----------------------------|------------------------------|-----------------|
| Name or Item Tag | Complete Luminaire Description | Watts per luminaire* | How Wattage is determined | Total number luminaires | Luminaire Status* | Excluded per §140.7(a) | Design Watts               | Corf. Req. > 150W §130.2(b)* | Field Inspector |
| L1               | LED FACADE FLOOD LIGHT         | 135                  | NAB Default               | 16                      | New               |                        | 2,160                      |                              |                 |
| L2               | LED FACADE LINEAR FIXTURE      | 12                   | NAB Default               | 112                     | New               |                        | 1,344                      |                              |                 |
| L6               | LED FACADE LINEAR FIXTURE      | 12                   | NAB Default               | 52                      | New               |                        | 624                        |                              |                 |
|                  |                                |                      |                           |                         |                   |                        | <b>Total Design Watts:</b> | <b>4,128</b>                 |                 |

\* NOTES: Selections with a \* require a note in the space below explaining how compliance is achieved.  
EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b).

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**Outdoor Lighting**  
CERTIFICATE OF COMPLIANCE  
Project Name: SOUTH BERKELEY  
Project Address: 2140 SHATTUCK AVE  
Report Page: 10/18/2018  
Date Prepared: 10/18/2018

**A. GENERAL INFORMATION**  
01 Project Location (city): BERKELEY  
02 Climate Zone: 3  
03 Outdoor Lighting Zone per Title 24, Part 1 §10-114 or as designated by Authority Having Jurisdiction (AHJ):  
 L2-0: Very Low - Undeveloped Parkland  L2-2: Moderate - Rural Areas  L2-4: High - Must be reviewed by CA Energy Commission for Approval  
 L2-1: Low - Developed Parkland  L2-3: Moderately High - Urban Areas

**B. PROJECT SCOPE**  
Table Instructions: Include any outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.00(b)(2) for alterations.  
My project consists of:  
 New Lighting System Must Comply with Allowances from §140.7  
 Altered Lighting System Is your alteration increasing the connected lighting load (Watts)?  Yes  No  
\* FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100

**C. COMPLIANCE RESULTS**  
Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. For guidance.  
Calculation of Total Allowed Lighting Power (Watts) §140.7 or §141.00(b)(2)

| 01                                     | 02                          | 03                         | 04                     | 05                               | 06                            | 07                                                 | 08                    | 09               |
|----------------------------------------|-----------------------------|----------------------------|------------------------|----------------------------------|-------------------------------|----------------------------------------------------|-----------------------|------------------|
| General Hardscape Allowance (140.7)(a) | Per Application (140.7)(d2) | Sales Frontage (140.7)(d2) | Ornamental (140.7)(d2) | Per Specific Area (141.00)(b)(2) | Existing Power (141.00)(b)(2) | Total Allowed (Watts)                              | Total Actual (Watts)  | 07 Must be <= 08 |
| 520                                    | +                           | +                          | +                      | +                                | +                             | 4,128                                              | OR =                  | 4,648            |
|                                        |                             |                            |                        |                                  |                               | <b>Cutoff Compliance (See Table G for Details)</b> | <b>Not Applicable</b> | <b>COMPLIES</b>  |

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| 01                   | 02                                   | 03                  | 04                      | 05                      | 06                         | 07                  | 08              | 09           | 10                                      |
|----------------------|--------------------------------------|---------------------|-------------------------|-------------------------|----------------------------|---------------------|-----------------|--------------|-----------------------------------------|
| Area Description     | Specific Area Type per Table 140.7-B | Specific Area (ft²) | Allowed Density (W/ft²) | Extra Allowance (Watts) | Luminaire Name or Item Tag | Watts per Luminaire | # of Luminaires | Design Watts | Additional Allowance (Watts)            |
| BUILDING FACADE EAST | Bldg Façade                          | 3,912               | 0.35                    | 1,369,199.9             | L6                         | 12                  | 26              | 312          |                                         |
|                      |                                      |                     |                         |                         |                            |                     |                 |              | Total Design Watts for this Area: 1,188 |

| 01                   | 02                                   | 03                  | 04                      | 05                      | 06                         | 07                  | 08              | 09           | 10                                              |
|----------------------|--------------------------------------|---------------------|-------------------------|-------------------------|----------------------------|---------------------|-----------------|--------------|-------------------------------------------------|
| Area Description     | Specific Area Type per Table 140.7-B | Specific Area (ft²) | Allowed Density (W/ft²) | Extra Allowance (Watts) | Luminaire Name or Item Tag | Watts per Luminaire | # of Luminaires | Design Watts | Additional Allowance (Watts)                    |
| BUILDING FACADE WEST | Bldg Façade                          | 3,192               | 0.35                    | 1,117,199.9             | L1                         | 135                 | 4               | 540          |                                                 |
| BUILDING FACADE WEST | Bldg Façade                          | 3,192               | 0.35                    | 1,117,199.9             | L2                         | 12                  | 28              | 336          |                                                 |
| BUILDING FACADE WEST | Bldg Façade                          | 3,192               | 0.35                    | 1,117,199.9             | L6                         | 12                  | 0               | 0            |                                                 |
|                      |                                      |                     |                         |                         |                            |                     |                 |              | Total Design Watts for this Area: 876           |
|                      |                                      |                     |                         |                         |                            |                     |                 |              | <b>Total Allowance (Watts) All Areas: 4,128</b> |

\* FOOTNOTES: See Table 140.7-B for the rules for calculating the specific areas (ft²) for these additional lighting allowances.

**N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)**  
This Section Does Not Apply

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Project Name: SOUTH BERKELEY  
Project Address: 2140 SHATTUCK AVE  
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| 01                    | 02                                   | 03                  | 04                      | 05                      | 06                         | 07                  | 08              | 09           | 10                                    |
|-----------------------|--------------------------------------|---------------------|-------------------------|-------------------------|----------------------------|---------------------|-----------------|--------------|---------------------------------------|
| Area Description      | Specific Area Type per Table 140.7-B | Specific Area (ft²) | Allowed Density (W/ft²) | Extra Allowance (Watts) | Luminaire Name or Item Tag | Watts per Luminaire | # of Luminaires | Design Watts | Additional Allowance (Watts)          |
| BUILDING FACADE NORTH | Bldg Façade                          | 3,192               | 0.35                    | 1,117,199.9             | L1                         | 135                 | 4               | 540          |                                       |
| BUILDING FACADE NORTH | Bldg Façade                          | 3,192               | 0.35                    | 1,117,199.9             | L2                         | 12                  | 28              | 336          |                                       |
| BUILDING FACADE NORTH | Bldg Façade                          | 3,192               | 0.35                    | 1,117,199.9             | L6                         | 12                  | 0               | 0            |                                       |
|                       |                                      |                     |                         |                         |                            |                     |                 |              | Total Design Watts for this Area: 876 |

| 01                    | 02                                   | 03                  | 04                      | 05                      | 06                         | 07                  | 08              | 09           | 10                                      |
|-----------------------|--------------------------------------|---------------------|-------------------------|-------------------------|----------------------------|---------------------|-----------------|--------------|-----------------------------------------|
| Area Description      | Specific Area Type per Table 140.7-B | Specific Area (ft²) | Allowed Density (W/ft²) | Extra Allowance (Watts) | Luminaire Name or Item Tag | Watts per Luminaire | # of Luminaires | Design Watts | Additional Allowance (Watts)            |
| BUILDING FACADE SOUTH | Bldg Façade                          | 3,876               | 0.35                    | 1,356,599.9             | L1                         | 135                 | 4               | 540          |                                         |
| BUILDING FACADE SOUTH | Bldg Façade                          | 3,876               | 0.35                    | 1,356,599.9             | L2                         | 12                  | 28              | 336          |                                         |
| BUILDING FACADE SOUTH | Bldg Façade                          | 3,876               | 0.35                    | 1,356,599.9             | L6                         | 12                  | 26              | 312          |                                         |
|                       |                                      |                     |                         |                         |                            |                     |                 |              | Total Design Watts for this Area: 1,188 |

| 01                   | 02                                   | 03                  | 04                      | 05                      | 06                         | 07                  | 08              | 09           | 10                           |
|----------------------|--------------------------------------|---------------------|-------------------------|-------------------------|----------------------------|---------------------|-----------------|--------------|------------------------------|
| Area Description     | Specific Area Type per Table 140.7-B | Specific Area (ft²) | Allowed Density (W/ft²) | Extra Allowance (Watts) | Luminaire Name or Item Tag | Watts per Luminaire | # of Luminaires | Design Watts | Additional Allowance (Watts) |
| BUILDING FACADE EAST | Bldg Façade                          | 3,912               | 0.35                    | 1,369,199.9             | L1                         | 135                 | 4               | 540          |                              |
| BUILDING FACADE EAST | Bldg Façade                          | 3,912               | 0.35                    | 1,369,199.9             | L2                         | 12                  | 28              | 336          |                              |

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**Outdoor Lighting**  
CERTIFICATE OF COMPLIANCE  
Project Name: SOUTH BERKELEY  
Project Address: 2140 SHATTUCK AVE  
Report Page: 10/18/2018  
Date Prepared: 10/18/2018

**I. LIGHTING POWER ALLOWANCE (per §140.7)**  
Table Instructions: Please complete this table for areas using the allowance calculations per §140.7. General Hardscape Allowance is per Table 140.7-A while "Use it or lose it" Allowances are per Table 140.7-B. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.

| 01                                     | 02                          | 03                         | 04                     | 05                               | 06                            | 07                                                 | 08                    | 09               |
|----------------------------------------|-----------------------------|----------------------------|------------------------|----------------------------------|-------------------------------|----------------------------------------------------|-----------------------|------------------|
| General Hardscape Allowance (140.7)(a) | Per Application (140.7)(d2) | Sales Frontage (140.7)(d2) | Ornamental (140.7)(d2) | Per Specific Area (141.00)(b)(2) | Existing Power (141.00)(b)(2) | Total Allowed (Watts)                              | Total Actual (Watts)  | 07 Must be <= 08 |
| 520                                    | +                           | +                          | +                      | +                                | +                             | 4,128                                              | OR =                  | 4,648            |
|                                        |                             |                            |                        |                                  |                               | <b>Cutoff Compliance (See Table G for Details)</b> | <b>Not Applicable</b> | <b>COMPLIES</b>  |

**J. LIGHTING ALLOWANCE: PER APPLICATION**  
This Section Does Not Apply

**K. LIGHTING ALLOWANCE: SALES FRONTAGE**  
This Section Does Not Apply

**L. LIGHTING ALLOWANCE: ORNAMENTAL**  
This Section Does Not Apply

**M. LIGHTING ALLOWANCE: PER SPECIFIC AREA**  
This Section Does Not Apply

**M. LIGHTING ALLOWANCE: PER SPECIFIC AREA**  
Table Instructions: Please complete this table for areas using the wattage allowance per specific area type from Table 140.7-B. More than one specific area allowance may be taken in a single project, if applicable. However, multiple specific area allowances may not be taken for the exact same area on the site. Table Continued

| 01               | 02                   | 03                                                   | 04                     | 05                    | 06                      | 07                       | 08                              | 09                                                |
|------------------|----------------------|------------------------------------------------------|------------------------|-----------------------|-------------------------|--------------------------|---------------------------------|---------------------------------------------------|
| Area Description | Unlimited Area (ft²) | Area Wattage Allowance (AWA) Allowed Density (W/ft²) | Area Allowance (Watts) | Perimeter Length (ft) | Linear Allowance (W/ft) | Linear Allowance (Watts) | Total General AWA + LWA (Watts) | Initial Wattage Allowance for Entire Site (Watts) |
|                  |                      | 0.04                                                 | 0                      |                       | 0.35                    | 0                        | 520                             | 520                                               |

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**Outdoor Lighting**  
CERTIFICATE OF COMPLIANCE  
Project Name: SOUTH BERKELEY  
Project Address: 2140 SHATTUCK AVE  
Report Page: 10/18/2018  
Date Prepared: 10/18/2018

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
Documentation Author Name: Kristoffer Cercena  
Company: Phase C Consulting  
Address: 5332 Seville Circle  
City/State/Zip: La Palma, CA 90623  
Documentation Author Signature: [Signature]  
Signature Date: 10-18-18  
CEA/HERS Certification Identification (if applicable): E21637  
Phone: 562-292-5613

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
I certify the following under penalty of perjury under the laws of the State of California:  
1. The information provided on this Certificate of Compliance is true and correct.  
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).  
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.  
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Kristoffer Cercena, P.E.  
Company: Phase C Consulting  
Address: 5332 Seville Circle  
City/State/Zip: La Palma, CA 90623  
Responsible Designer Signature: [Signature]  
Date Signed: 10-18-18  
License: E 21637  
Phone: 562-292-5613

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**Outdoor Lighting**  
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Project Name: SOUTH BERKELEY  
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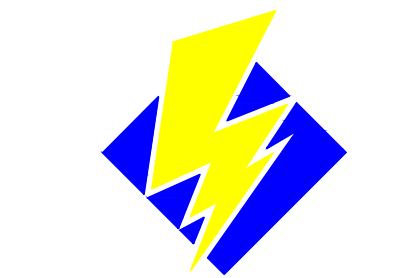
**D. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION**  
Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at <http://www.energy.ca.gov/2015publications/CEC-400-2015-033/appendices/forms/NRCL>

| YES                      | NO                       | Form/Title                                                                                                                                           | Field Inspector                                             |
|--------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | NRCL-ITO-01-E - Must be submitted for all buildings.                                                                                                 | Pass <input type="checkbox"/> Fail <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | NRCL-ITO-02-E - Must be submitted for a lighting control system; or for an Energy Management Control System (EMCS), to be recognized for compliance. | Pass <input type="checkbox"/> Fail <input type="checkbox"/> |

**P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE**  
Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: <http://www.energy.ca.gov/title24/2016standards>

| YES                      | NO                       | Form/Title                                                                                                                               | Field Inspector                                             |
|--------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | NRCA-ITO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls area added to ≤ 20 luminaires. | Pass <input type="checkbox"/> Fail <input type="checkbox"/> |

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2016standards> September 2017



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CLIENT

CONSULTANT

PROJECT LOCATION SOUTH BERKELEY

C-617G  
2140 SHATTUCK AVE,  
BERKELEY, CA 94704

TITLE 24  
COMPLIANCE FORMS  
EXTERIOR

SHEET TITLE



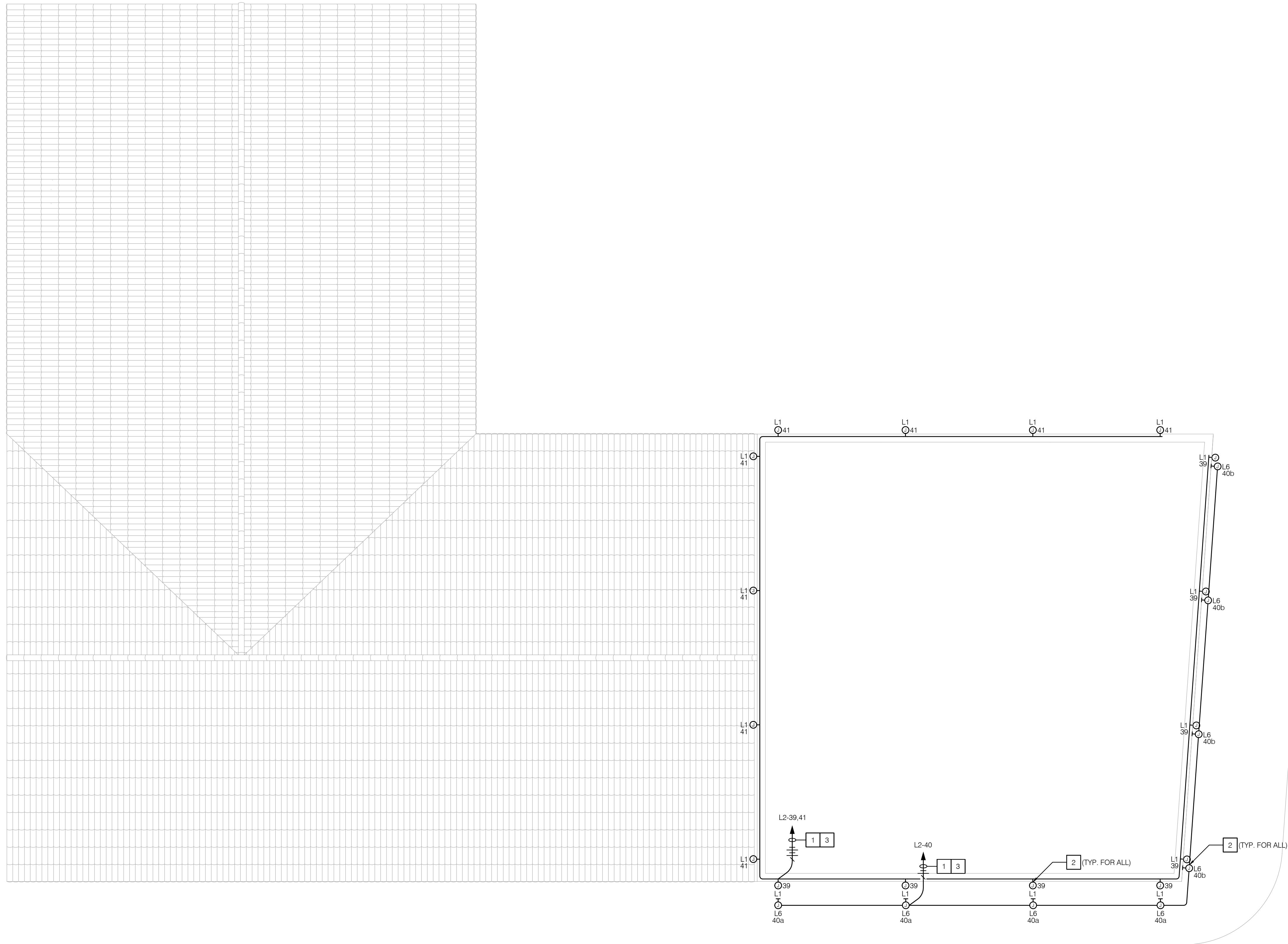
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REVISIONS  
DATE 2018.10.18  
PROJECT NUMBER MAE-1801  
SHEET NUMBER

20.02

ISSUE FOR PLAN CHECK: 2018\_10\_18



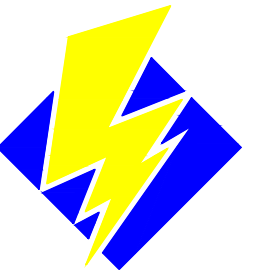


**GENERAL NOTES**

1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF WORK.
2. LABELS AND DIRECTORIES SHALL BE UPDATED ON EXISTING PANELS THAT ARE BEING USED WITHIN THE PROJECT SCOPE OF WORK. THE CONTRACTOR SHALL TURN ALL UNUSED BREAKERS TO THE 'OFF' POSITION AND LABEL AS 'SPARE'.
3. ALL POWER SHUT-DOWNS SHALL BE PERFORMED DURING 'OFF' HOURS, WEEKENDS OR ON HOLIDAYS ONLY. ALL POWER SHUT-DOWNS SHALL BE COORDINATED AND APPROVED BY OWNER IN WRITING. CONTRACTOR SHALL PROVIDE OWNER WITH A MINIMUM OF TWO WEEKS ADVANCED NOTICE IN WRITING PRIOR TO ANY SCHEDULED SHUT-DOWNS.

**KEY NOTES**

1. PROVIDE NEW 120V, 20A/1P, CIRCUIT BREAKER IN AVAILABLE SPACE. NEW CIRCUIT BREAKER SHALL MATCH EXISTING MANUFACTURER, FRAME, TYPE AND AIC BREAKER AS REQUIRED. UPDATE PANEL SCHEDULES WITH REVISED LOAD.
2. REFER TO ELEVATIONS ON SHEETS E4.01 & E4.02 FOR EXACT PLACEMENT OF FIXTURE. SCOPE OF WORK SHALL BE DONE IN A HISTORICAL BUILDING AND ALL CONDUITS SHALL BE ROUTED IN THE INTERIOR OF BUILDING AND STUBBED-UP AT FIXTURE LOCATION. FIELD VERIFY EXACT CONDUIT ROUTING WITH EXISTING CONDITIONS PRIOR TO START OF WORK.
3. PROVIDE AND INSTALL NEW TITLE 24 COMPLIANT PHOTO-CONTROLS FOR EXTERIOR LIGHTING. ROUTE BRANCH CIRCUIT THROUGH PHOTO-CONTROLS AS REQUIRED.



**PHASE C  
CONSULTING**

5532 SEVILLE CIRCLE  
LA PALMA, CA 90623  
562.292.5613  
WWW.PHASE-C.COM

CLIENT

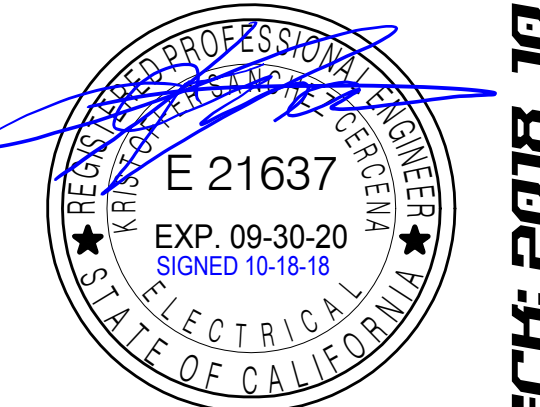
CONSULTANT

PROJECT LOCATION  
**SOUTH BERKELEY**

C-617G  
2140 SHATTUCK AVE.  
BERKELEY, CA 94704

SHEET TITLE  
**1ST FLOOR  
EXTERIOR LIGHTING PLAN**

STAMP



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REVISIONS

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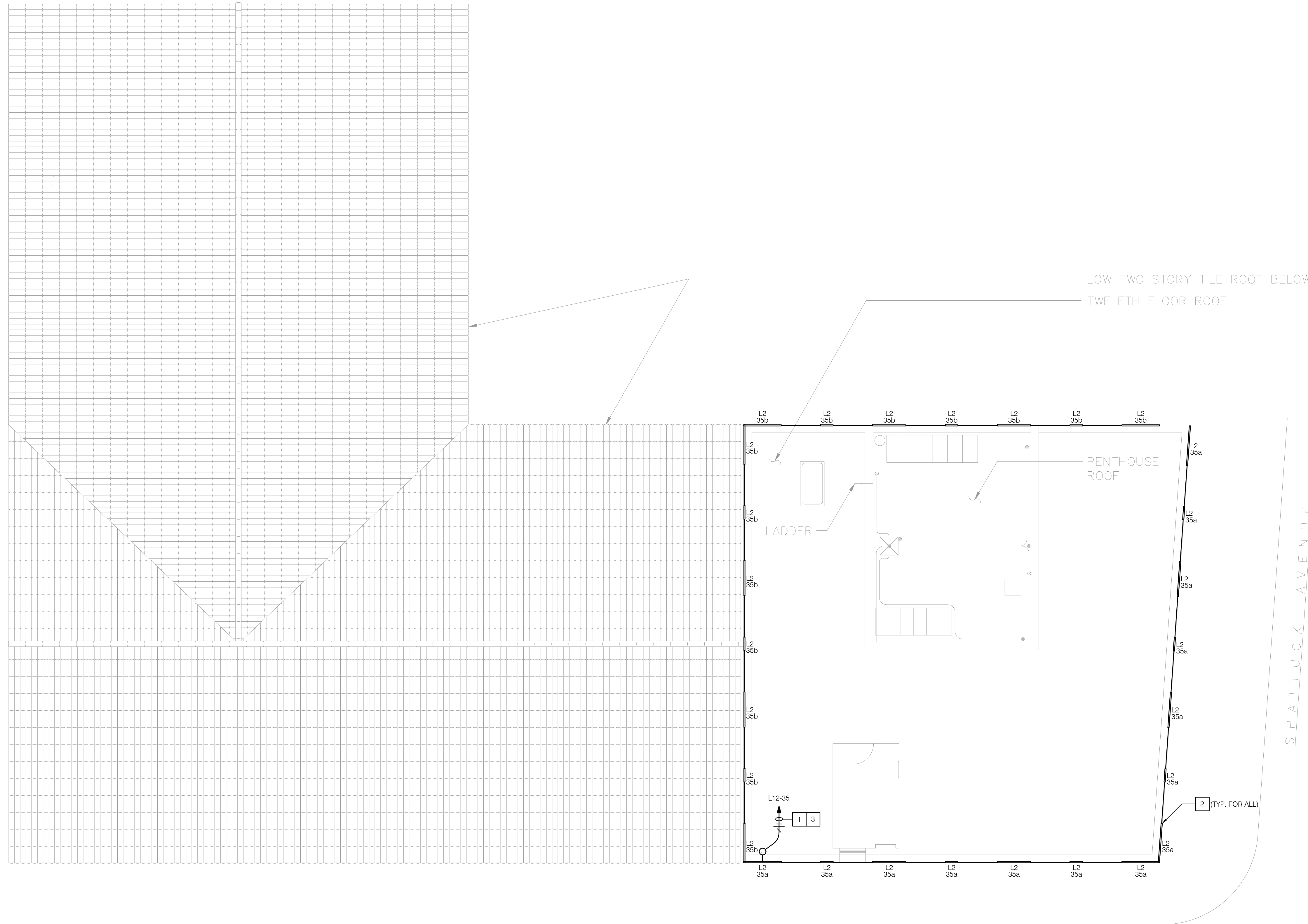
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SHEET NUMBER

**E2.01**

ISSUE FOR PLAN CHECK: 2018\_10\_18





LOW TWO STORY TILE ROOF BELOW  
TWELFTH FLOOR ROOF

**GENERAL NOTES**

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**KEY NOTES**

1. PROVIDE NEW 120V, 20A/1P, CIRCUIT BREAKER IN AVAILABLE SPACE. NEW CIRCUIT BREAKER SHALL MATCH EXISTING MANUFACTURER, FRAME, TYPE AND AIC BREAKER AS REQUIRED. UPDATE PANEL SCHEDULES WITH REVISED LOAD.
2. REFER TO ELEVATIONS ON SHEETS E4.01 & E4.02 FOR EXACT PLACEMENT OF FIXTURE. SCOPE OF WORK SHALL BE DONE IN A HISTORICAL BUILDING AND ALL CONDUITS SHALL BE ROUTED IN THE INTERIOR OF BUILDING AND STUBBED-UP AT FIXTURE LOCATION. FIELD VERIFY EXACT CONDUIT ROUTING WITH EXISTING CONDITIONS PRIOR TO START OF WORK.
3. PROVIDE AND INSTALL NEW TITLE 24 COMPLIANT PHOTO-CONTROLS FOR EXTERIOR LIGHTING. ROUTE BRANCH CIRCUIT THROUGH PHOTO-CONTROLS AS REQUIRED.



CLIENT

CONSULTANT

PROJECT LOCATION **SOUTH BERKELEY**  
C-617G  
2140 SHATTUCK AVE.  
BERKELEY, CA 94704  
SHEET TITLE **12TH FLOOR EXTERIOR LIGHTING PLAN**



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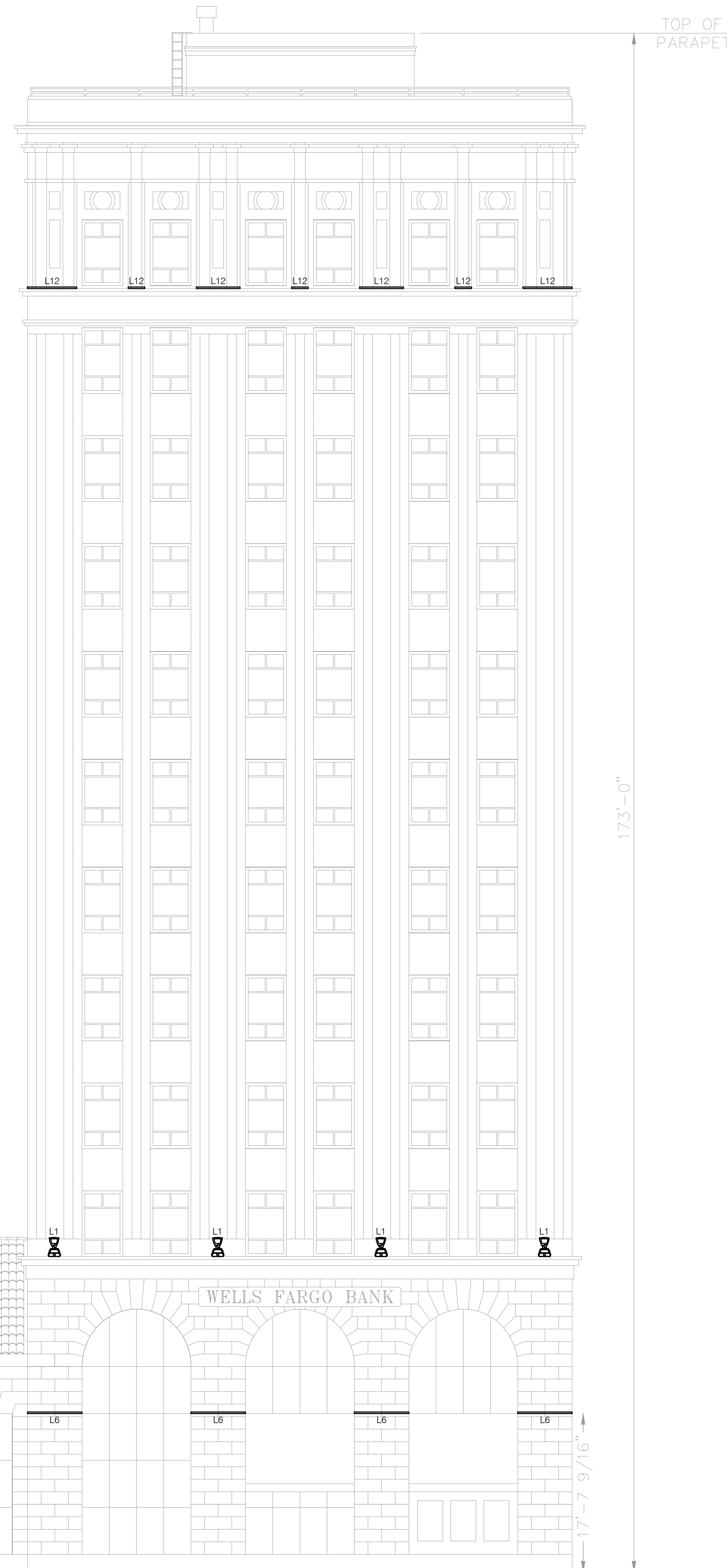
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PROJECT NUMBER  
MAE-1801  
SHEET NUMBER

**E2.12**

ISSUE FOR PLAN CHECK: 2018\_10\_18

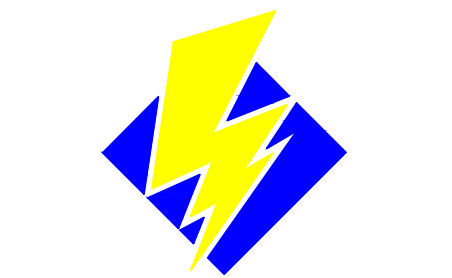


**GENERAL NOTES**

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**KEY NOTES**

1. INTERCEPT EXISTING BRANCH CIRCUITS ABOVE ACCESSIBLE CEILING. EXTEND EXISTING BRANCH CIRCUITS AS REQUIRED AND CIRCUIT ACCORDINGLY AS SHOWN.
2. PROVIDE AND INSTALL ONE-PIECE, 4X4 COMBINATION POWER/TELECOM, FLUSH-MOUNTED, FIRE-RATED POKE-THROUGH DEVICE WITH JUNCTION BOX, FOUR (4) PRE-WIRED RECEPTACLES AND FOUR (4) TEL/DATA MODULAR JACKS (S1SP4X4 SUB-PLATE), HUBBELL, SYSTEMONE FRPT SERIES, CATALOG NO. S1PT4X4BLJ, WITH BLACK FINISH. COORDINATE EXACT FINISHES WITH ARCHITECT PRIOR TO ORDERING. EXACT LOCATION OF DEVICE SHALL BE FIELD COORDINATED AND FIELD VERIFIED WITH FURNITURE VENDOR PRIOR TO CORING.
3. PROVIDE AND INSTALL ONE-PIECE, 4X4 COMBINATION AUDIO / VISUAL, FLUSH-MOUNTED, FIRE-RATED POKE-THROUGH DEVICE WITH JUNCTION BOX, HUBBELL, SYSTEMONE FRPT SERIES, CATALOG NO. S1PT3IMBLJ, WITH BLACK FINISH. COORDINATE EXACT FINISHES WITH ARCHITECT PRIOR TO ORDERING. EXACT LOCATION OF DEVICE SHALL BE FIELD COORDINATED AND FIELD VERIFIED WITH FURNITURE VENDOR PRIOR TO CORING.



**PHASE C  
CONSULTING**

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LA PALMA, CA 90623  
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CLIENT

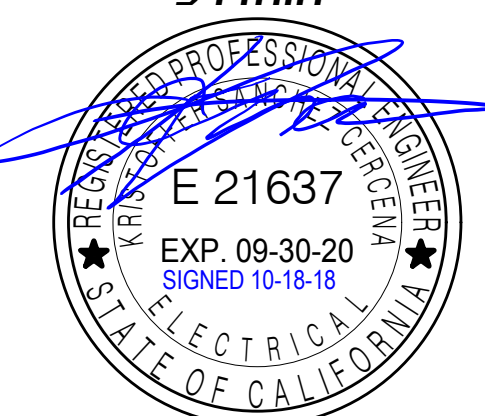
CONSULTANT

PROJECT LOCATION  
**SOUTH BERKELEY**

C-617G  
2140 SHATTUCK AVE.  
BERKELEY, CA 94704

SHEET TITLE  
**SOUTH ELEVATION**

STAMP



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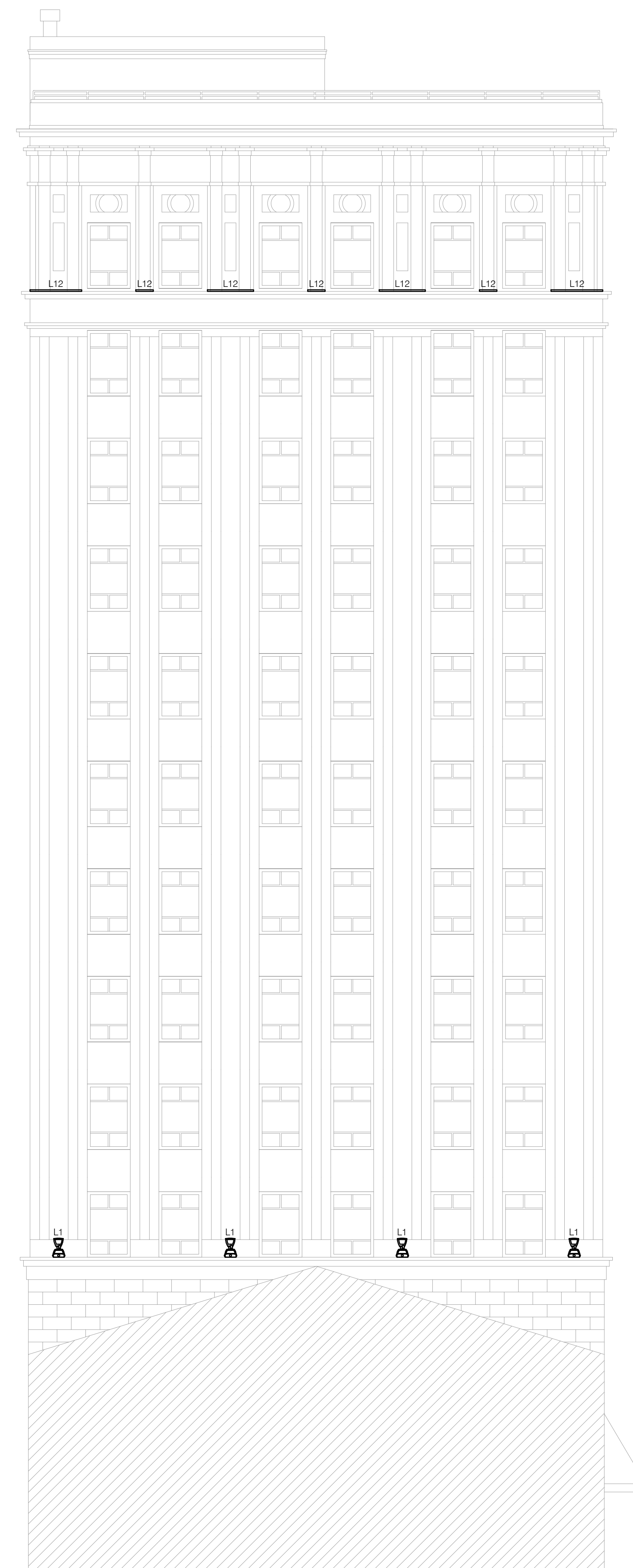
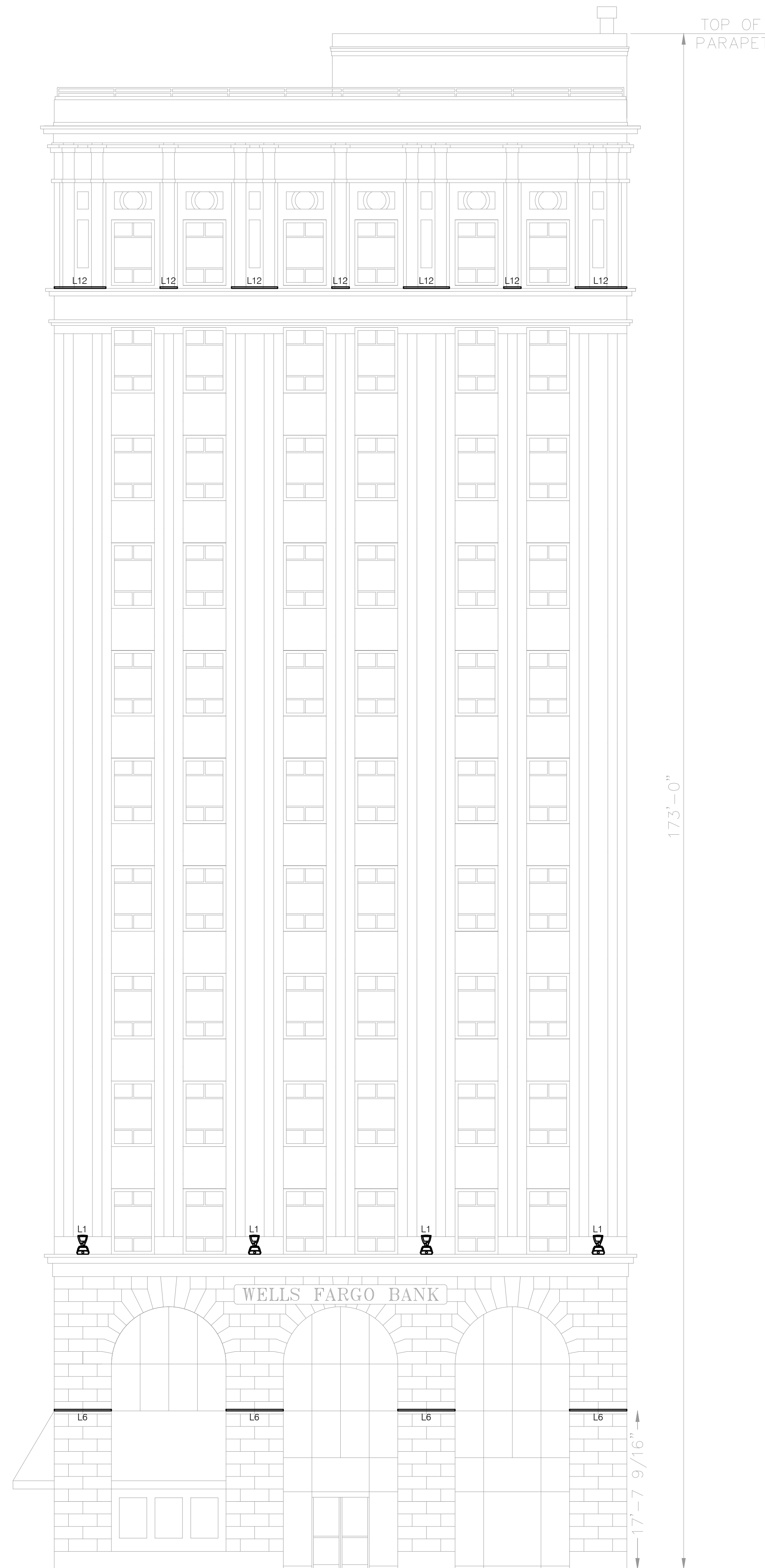
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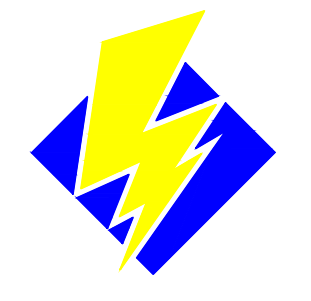
**E4.01**

ISSUE FOR PLAN CHECK: 2018\_10\_18



**GENERAL NOTES**

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**PHASE C  
CONSULTING**  
5532 SEVILLE CIRCLE  
LA PALMA, CA 90623  
562.292.5613  
WWW.PHASE-C.COM

CLIENT

CONSULTANT

PROJECT LOCATION  
**SOUTH BERKELEY**

C-617G  
2140 SHATTUCK AVE.  
BERKELEY, CA 94704

**NORTH & EAST  
ELEVATION**

SHEET TITLE

STAMP



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2018.10.18

PROJECT NUMBER

MAE-1801

SHEET NUMBER

**E4.02**

ISSUE FOR PLAN CHECK: 2018\_10\_18



### INSIGHT SHAPING THE EXPERIENCE OF LIGHT™

### MasqueLED FACADE/FLOOD LIGHTING ACTIVE WHITE LIGHT (KEVIN TUNABLE FROM 2700K - 6500K)

MQ\_

#### STEP 1 - FIXTURE ORDERING INFORMATION

| PREFIX | WATTAGE | LED COLOR | OPTICS                                 | MOUNTING                                                                                                                                                                                                                                           | VOLTAGE/WIRING METHOD                  | FINISH                                                                                                                                                                                                                                               | ACCESSORIES                                                                                                                                                                                                            |
|--------|---------|-----------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MG2    | 30      | AWH       | 7°<br>15°<br>30°<br>45°<br>100°<br>HSL | MASQUE 1 & 2<br>MOUNTING OPTIONS<br>SM = Surface Mount, Wall or Ground<br>CM = Conduit Mount<br>DKM = Extended Arm (X = arm length)<br>WMQ2 = Two Fixtures, Direct & Indirect, Wall Mount (X = arm length)<br>STM = Standoff (X = standoff height) | INT = 120V, 277V Integral power supply | TW = Textured White<br>TBL = Textured Black<br>TBR = Textured Bronze<br>TLB = Textured Light Bronze<br>TN = Textured Natural<br>TS = Textured Sandstone<br>CC = Custom Color *<br>* Contact factory for custom color. Additional charges will apply. | EXTERNAL SHIELDS<br>ECB = Cross Baffle<br>EHB = Horizontal Baffle<br>EVB = Vertical Baffle<br>BD = Barn Doors<br>VS = Cutoff Visor<br>SN = Snoot<br>* Contact factory for custom color. Additional charges will apply. |
| MG4    | 135     | AWH       | 7°<br>15°<br>30°<br>45°<br>100°<br>HSL | MASQUE 4<br>MOUNTING OPTIONS<br>SM = Surface Mount, Wall or Ground<br>CM = Conduit Mount<br>DKM = Extended Arm (X = arm length)<br>STM = Standoff (X = standoff height)                                                                            | INT = 120V, 277V Integral power supply | TW = Textured White<br>TBL = Textured Black<br>TBR = Textured Bronze<br>TLB = Textured Light Bronze<br>TN = Textured Natural<br>TS = Textured Sandstone<br>CC = Custom Color *<br>* Contact factory for custom color. Additional charges will apply. | EXTERNAL SHIELDS<br>ECB = Cross Baffle<br>EHB = Horizontal Baffle<br>EVB = Vertical Baffle<br>BD = Barn Doors<br>VS = Cutoff Visor<br>SN = Snoot<br>* Contact factory for custom color. Additional charges will apply. |

Active White Note:  
• DMX Control System must be ordered separately. Contact factory for details.  
• One IP7 Programming Tool is required for field re-addressing of factory DMX settings. See below.

Horizontal Baffle (EHB) Vertical Baffle (EVB) Barn Doors (BD) Cutoff Visor (VS) Adjustable Snoot (FS) Wire Snoot (WS)

#### STEP 2 - ORDER DMX DISTRIBUTION & PROGRAMMING KIT

DMX DISTRIBUTION & PROGRAMMING KIT - REQUIRED FOR ALL ACTIVE WHITE INSTALLATIONS

| CATALOG NUMBER | DESCRIPTION                                                                                                                                                                                                                                |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UPT            | DMX PROGRAMMING TOOL: One UPT is required for field re-addressing of factory DMX settings.                                                                                                                                                 |
| CDS-A          | DMX DISTRIBUTION KIT ONLY (4 OUTPUTS): CDS-A consists of four outputs. Each output accommodates up to 32 fixtures in R7/RDM wiring methods and unlimited fixtures in ACV wiring method. Four terminators are included for use as required. |

STANDARD EXTERIOR FINISHES

|                |                |                 |                       |                  |                    |
|----------------|----------------|-----------------|-----------------------|------------------|--------------------|
| TEXTURED WHITE | TEXTURED BLACK | TEXTURED BRONZE | TEXTURED LIGHT BRONZE | TEXTURED NATURAL | TEXTURED SANDSTONE |
|----------------|----------------|-----------------|-----------------------|------------------|--------------------|

Color Disclaimer  
Due to the many variations in monitors and browsers, color samples may appear different on different monitors. Computer monitors are not all calibrated equally and color reproduction on the Internet is not precise.  
Please contact your local Insight Representative to obtain color chips for accurate colors. <http://www.insightlighting.com/agent/locator/>

Insight Lighting  
www.insightlighting.com  
08/14/2017  
2 of 4

### INSIGHT SHAPING THE EXPERIENCE OF LIGHT™

### MasqueLED FACADE/FLOOD LIGHTING ACTIVE WHITE LIGHT (KEVIN TUNABLE FROM 2700K - 6500K)

| ITEM                            | SPECIFICATION                                                                                                                                                                                                                                                                                                                                                                                           |                                 |                        |                 |                        |     |    |           |            |     |    |           |            |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------|-----------------|------------------------|-----|----|-----------|------------|-----|----|-----------|------------|
| LIGHT SOURCE                    | 30W, 50W, 135W                                                                                                                                                                                                                                                                                                                                                                                          |                                 |                        |                 |                        |     |    |           |            |     |    |           |            |
| OPTICS                          |                                                                                                                                                                                                                                                                                                                                                                                                         |                                 |                        |                 |                        |     |    |           |            |     |    |           |            |
| COLOR TEMPERATURES              | ACTIVE WHITE, KEVIN TUNABLE FROM 27K - 65K                                                                                                                                                                                                                                                                                                                                                              |                                 |                        |                 |                        |     |    |           |            |     |    |           |            |
| CRI                             | 82                                                                                                                                                                                                                                                                                                                                                                                                      |                                 |                        |                 |                        |     |    |           |            |     |    |           |            |
| PERFORMANCE                     | <table border="1"> <thead> <tr> <th>FIXTURE WATTAGE (TOTAL WATTAGE)</th> <th>OPTICS</th> <th>EFFICACY (lm/W)</th> <th>PEAK CANDELA (CD / m²)</th> </tr> </thead> <tbody> <tr> <td>30W</td> <td>7°</td> <td>1588 lm/W</td> <td>28.40 lm/W</td> </tr> <tr> <td>50W</td> <td>7°</td> <td>1588 lm/W</td> <td>29.72 lm/W</td> </tr> </tbody> </table>                                                        | FIXTURE WATTAGE (TOTAL WATTAGE) | OPTICS                 | EFFICACY (lm/W) | PEAK CANDELA (CD / m²) | 30W | 7° | 1588 lm/W | 28.40 lm/W | 50W | 7° | 1588 lm/W | 29.72 lm/W |
| FIXTURE WATTAGE (TOTAL WATTAGE) | OPTICS                                                                                                                                                                                                                                                                                                                                                                                                  | EFFICACY (lm/W)                 | PEAK CANDELA (CD / m²) |                 |                        |     |    |           |            |     |    |           |            |
| 30W                             | 7°                                                                                                                                                                                                                                                                                                                                                                                                      | 1588 lm/W                       | 28.40 lm/W             |                 |                        |     |    |           |            |     |    |           |            |
| 50W                             | 7°                                                                                                                                                                                                                                                                                                                                                                                                      | 1588 lm/W                       | 29.72 lm/W             |                 |                        |     |    |           |            |     |    |           |            |
| LUMEN MAINTENANCE               | 90% @ 50,000 hrs                                                                                                                                                                                                                                                                                                                                                                                        |                                 |                        |                 |                        |     |    |           |            |     |    |           |            |
| ELECTRICAL                      | AC LINE VOLTAGE: 120V to 277V<br>POWER SUPPLY: INTEGRAL TO THE LUMINAIRE<br>POWER CONSUMPTION: 50W, 55.6W, 135W, 145.9W                                                                                                                                                                                                                                                                                 |                                 |                        |                 |                        |     |    |           |            |     |    |           |            |
| CONTROL                         | DMX READY                                                                                                                                                                                                                                                                                                                                                                                               |                                 |                        |                 |                        |     |    |           |            |     |    |           |            |
| PHYSICAL                        | HOUSING: Heavy duty die-cast aluminum, powder-coated finish<br>LENSES: Tempered glass<br>DIMENSIONS (H X W X D): MASQUE 2 - SM Mounting: 12.3/4" x 5.3/4" x 7.1/8"; MASQUE 4 - SM Mounting: 21.5/8" x 12.1/8" x 7.1/8"<br>WEIGHT: MASQUE 2 - SM Mounting: 17 lbs (5 kg); MASQUE 4 - SM Mounting: 47 lbs (21 kg)<br>ETN: MASQUE 2: 0.891 FT MASQUE 4: 2.269 FT<br>OPERATING TEMPERATURE: -25° C to 40° C |                                 |                        |                 |                        |     |    |           |            |     |    |           |            |
| CERTIFICATIONS                  | ETL 1861 Location<br>RoHS COMPLIANT<br>ENERGY STAR                                                                                                                                                                                                                                                                                                                                                      |                                 |                        |                 |                        |     |    |           |            |     |    |           |            |
| WARRANTY                        | LIMITED<br>5 Year                                                                                                                                                                                                                                                                                                                                                                                       |                                 |                        |                 |                        |     |    |           |            |     |    |           |            |

Insight Lighting  
www.insightlighting.com  
08/14/2017  
1 of 4

### Maelight

The intention of illuminating 2140 Shattuck Ave is to highlight the splendor of this historic building. We are proposing a set of luminaires that produce warm white, highly controlled lighting output that purposefully illuminates the finest details of the architecture.

#### July 2018 Berkeley Shattuck Building Lighting Program

| Fixture ID | QTY | Location               | Fixture Type            | Task                                                                       | Fixture Matrix                              | Color Rendition | Fixture Finish   | Voltage      |
|------------|-----|------------------------|-------------------------|----------------------------------------------------------------------------|---------------------------------------------|-----------------|------------------|--------------|
| L1         | 16  | Exterior Brick Columns | Facio LED Uplight Flood | Controlled Up Light to illuminate 4 Brick Columns On Each Side of Building | MQ4-135-AWH-2-30A-INT-20-18E-EVB-VWG        | 2700K           | Textured Bronze  | 120 Vt       |
| L2         | 4   | Exterior Roof Crown    | Linear LED Uplight      | Linear LED Uplight Cast Upwards to illuminate Decorative Crown             | LSD-E-48-12-97-80-MUL-L-OL-Remote Drivers   | 2700K           | Factory Aluminum | 120 to 12 Vt |
| L6         | 6   | Exterior Façade Arches | Linear Uplight          | Controlled LED Strip to Light Between Façade Arches                        | LSD-E-48-04-27-80-MUL-L-OL-WITH ACCESSORIES | 2700K           | Factory Aluminum | 120 Vt       |

Maelight  
121 Broadway Suite 526 San Diego, CA 92101 p. 619-794-5626 e.info@maelight.com

### alumLEDs™ Manufactured in the U.S.A.

### ALS800T L6 First Lo

NOT TO SCALE ±.015" tolerance

FEATURES  
Applications: Indirect and Direct Lighting  
PRIMARY VOLTAGE: 120V or 277V  
SECONDARY VOLTAGE: 24VDC  
LAMP TYPE: High, Mid, or Standard Output LEDs (No Mercury)  
LENGTH: Built to Order  
CONSTRUCTION: Aluminum Extrusion  
MOUNTING: Mounting Clips  
LISTING: Dry or Wet (IP65 or IP67) Location  
UL1598, CSA C22.2#250.0  
UL8750, CSA250  
UL2108, CSA C22.2 #9  
CRI: High Output (HO) > 90  
Mid Output (MO) > 90  
Standard Output (SO) > 90  
DIMMING: Forward Phase, 0-10V, Title 24, or DALI

OPTICS (End View)  
Clear Lens, Frosted, Semi-Frosted, and Asymmetric Lens (15°, 30°, 45°, 60°)

MOUNTING CLIPS (Not Included)  
ALS800T-MC-1, ALS800T-MC-2, ALS800T-MC-3 (Adjustable), ALS800T-MC-4-X (Specify Length, Max. 2')

ELECTRICAL  
alumLEDs remote or integral drivers (included) are available with 120V or 277V primary voltage and 24VDC secondary voltage.

LAMP SPECIFICATIONS

| LAMP NUMBER | DESCRIPTION         | HIGH OUTPUT | MID OUTPUT | STANDARD OUTPUT |
|-------------|---------------------|-------------|------------|-----------------|
| LED-2.4K    | 2400K Incand. White | 120         | 95         | 85              |
| LED-2.7K    | 2700K Warm White    | 120         | 95         | 85              |
| LED-3.0K    | 3000K Warm White    | 120         | 95         | 90              |
| LED-3.5K    | 3500K Neutral White | 120         | 95         | 90              |
| LED-4.0K    | 4000K Neutral White | 120         | 95         | 90              |
| LED-4.5K    | 4500K Neutral White | 120         | 95         | 90              |
| LED-5.0K    | 5000K Cool White    | 130         | 99         | 95              |
| LED-5.7K    | 5700K Cool White    | 130         | 99         | 95              |

SPECIFY PRODUCT CODE (Use drop down menu to complete table or fill in the blanks)

| ALS800T | CL | WH       | LED-2.7K | 12V | HO | BF  | WET  | LIST | 120V | TBD |
|---------|----|----------|----------|-----|----|-----|------|------|------|-----|
| CL      | WH | LED-2.7K | 12V      | HO  | BF | WET | LIST | 120V | TBD  |     |

California Accent Lighting, Inc.  
2034 E. Lincoln Ave. #431, Anaheim, CA 92806  
ph. 800.921.CALI (2254) or 714.535.7900 | fx. 714.535.7902  
info@calighting.com | calighting.com

### alumLEDs™ Manufactured in the U.S.A.

### ALS800T L2 Crown

NOT TO SCALE ±.015" tolerance

FEATURES  
Applications: Indirect and Direct Lighting  
PRIMARY VOLTAGE: 120V or 277V  
SECONDARY VOLTAGE: 24VDC  
LAMP TYPE: High, Mid, or Standard Output LEDs (No Mercury)  
LENGTH: Built to Order  
CONSTRUCTION: Aluminum Extrusion  
MOUNTING: Mounting Clips  
LISTING: Dry or Wet (IP65 or IP67) Location  
UL1598, CSA C22.2#250.0  
UL8750, CSA250  
UL2108, CSA C22.2 #9  
CRI: High Output (HO) > 90  
Mid Output (MO) > 90  
Standard Output (SO) > 90  
DIMMING: Forward Phase, 0-10V, Title 24, or DALI

OPTICS (End View)  
Clear Lens, Frosted, Semi-Frosted, and Asymmetric Lens (15°, 30°, 45°, 60°)

MOUNTING CLIPS (Not Included)  
ALS800T-MC-1, ALS800T-MC-2, ALS800T-MC-3 (Adjustable), ALS800T-MC-4-X (Specify Length, Max. 2')

ELECTRICAL  
alumLEDs remote or integral drivers (included) are available with 120V or 277V primary voltage and 24VDC secondary voltage.

LAMP SPECIFICATIONS

| LAMP NUMBER | DESCRIPTION         | HIGH OUTPUT | MID OUTPUT | STANDARD OUTPUT |
|-------------|---------------------|-------------|------------|-----------------|
| LED-2.4K    | 2400K Incand. White | 120         | 95         | 85              |
| LED-2.7K    | 2700K Warm White    | 120         | 95         | 85              |
| LED-3.0K    | 3000K Warm White    | 120         | 95         | 90              |
| LED-3.5K    | 3500K Neutral White | 120         | 95         | 90              |
| LED-4.0K    | 4000K Neutral White | 120         | 95         | 90              |
| LED-4.5K    | 4500K Neutral White | 120         | 95         | 90              |
| LED-5.0K    | 5000K Cool White    | 130         | 99         | 95              |
| LED-5.7K    | 5700K Cool White    | 130         | 99         | 95              |

SPECIFY PRODUCT CODE (Use drop down menu to complete table or fill in the blanks)

| ALS800T | CL | WH       | LED-2.7K | 12V | HO | BF  | WET      | 24V-277V | TBD |
|---------|----|----------|----------|-----|----|-----|----------|----------|-----|
| CL      | WH | LED-2.7K | 12V      | HO  | BF | WET | 24V-277V | TBD      |     |

California Accent Lighting, Inc.  
2034 E. Lincoln Ave. #431, Anaheim, CA 92806  
ph. 800.921.CALI (2254) or 714.535.7900 | fx. 714.535.7902  
info@calighting.com | calighting.com

### INSIGHT SHAPING THE EXPERIENCE OF LIGHT™

### MasqueLED FACADE/FLOOD LIGHTING ACTIVE WHITE LIGHT (KEVIN TUNABLE FROM 2700K - 6500K)

SM - SURFACE, WALL, GROUND

| PRODUCT  | DIM A   | DIM B   | DIM C   | DIM D  | DIM E   | DIM F   |
|----------|---------|---------|---------|--------|---------|---------|
| MASQUE 1 | 6"      | 6-3/4"  | 3"      | 5-1/8" | 9-5/8"  | 8-5/8"  |
| MASQUE 2 | 7-1/4"  | 7-1/8"  | 6-7/8"  | 5-3/4" | 10-3/4" | 11-1/2" |
| MASQUE 4 | 14-7/8" | 13-1/8" | 12-3/4" | 9-1/2" | 21"     | 18-1/8" |

CM - CONDUIT MOUNT

| PRODUCT  | DIM A   | DIM B   | DIM C   | DIM D  | DIM E   |
|----------|---------|---------|---------|--------|---------|
| MASQUE 1 | 6"      | 7-1/4"  | 3"      | 6"     | 9-5/8"  |
| MASQUE 2 | 7-1/4"  | 7-1/8"  | 6-7/8"  | 6"     | 10-3/4" |
| MASQUE 4 | 14-7/8" | 13-1/8" | 12-3/4" | 9-1/2" | 18-1/8" |

EX - EXTENDED ARM

| PRODUCT  | DIM A   | DIM B   | DIM C   | DIM D  | DIM E   |
|----------|---------|---------|---------|--------|---------|
| MASQUE 1 | 6"      | 6-3/4"  | 3"      | 5-1/8" | 11"     |
| MASQUE 2 | 7-1/4"  | 7-1/8"  | 6-7/8"  | 5-3/4" | 13-7/8" |
| MASQUE 4 | 14-7/8" | 13-1/8" | 12-3/4" | 9-1/2" | 21-3/4" |

Specify Arm Length:  
Masque 1: Specify 6", 12", 18" or 24"  
Masque 2: Specify 8", 12", 18" or 24"  
Masque 4: Specify 12", 18" or 24"

REVISIONS

DATE: 2018.10.18  
PROJECT NUMBER: MAE-1801  
SHEET NUMBER: 27.00

Insight Lighting  
www.insightlighting.com  
08/14/2017  
3 of 4

PHASE C CONSULTING  
5538 SEVILLE CIRCLE  
LA PALMA, CA 90623  
562.292.5613  
WWW.PHASE-C.COM

CLIENT

CONSULTANT

PROJECT LOCATION: SOUTH BERKELEY  
C-617G  
2140 SHATTUCK AVE.  
BERKELEY, CA 94704

SHEET TITLE: FIXTURE SCHEDULE

STAMP  
REGISTERED PROFESSIONAL ENGINEER  
E 21637  
EXP. 09-30-20  
SIGNED 10-18-18  
STATE OF CALIFORNIA  
ELECTRICAL

SHEETS BEARING THIS SEAL AND WET SIGNATURE ARE AUTHENTICATED. RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS OR INSTRUMENTS ARE DISCLAIMED.

REVISIONS

DATE: 2018.10.18  
PROJECT NUMBER: MAE-1801  
SHEET NUMBER: 27.00

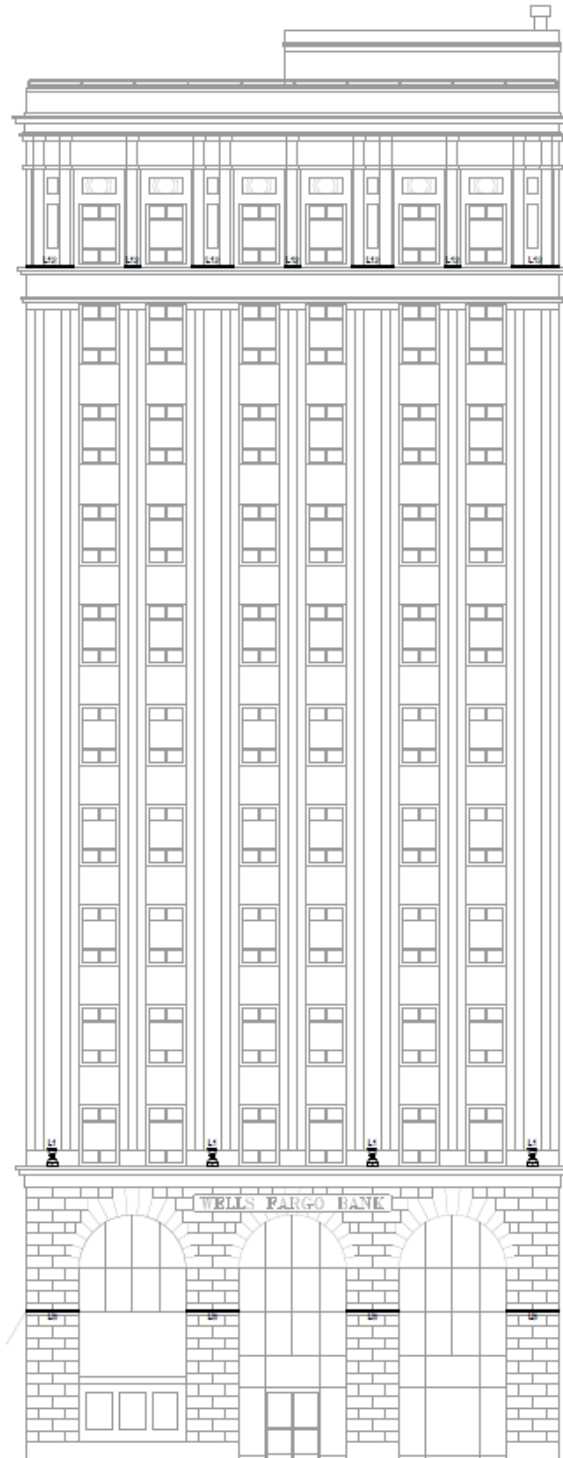
Insight Lighting  
www.insightlighting.com  
08/14/2017  
3 of 4



Maelisa Reed Lighting

2140 Shattuck Ave – Exterior Building Illumination Supplemental Design Submission 2

L1 Elevation View



Land Use Planning  
Received  
January 22, 2019

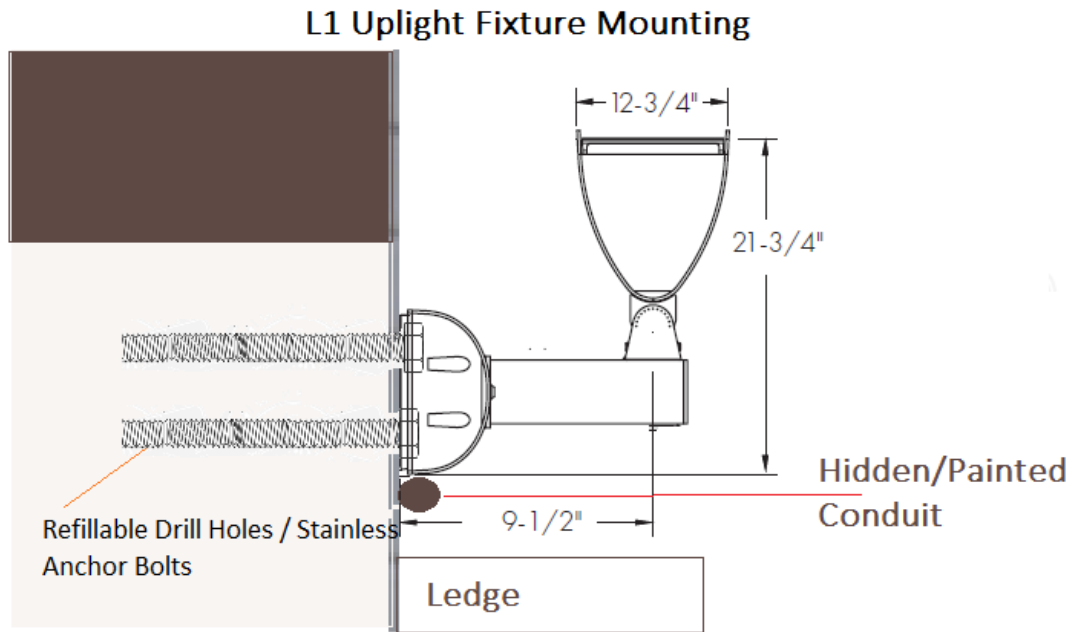
Maelisa Reed Lighting

L1 Example



Maelisa Reed Lighting

L1- Light Fixture Type Mounting Visuals

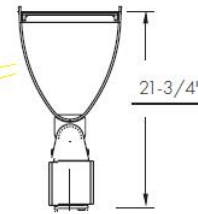


Maelisa Reed Lighting

L1 Scale



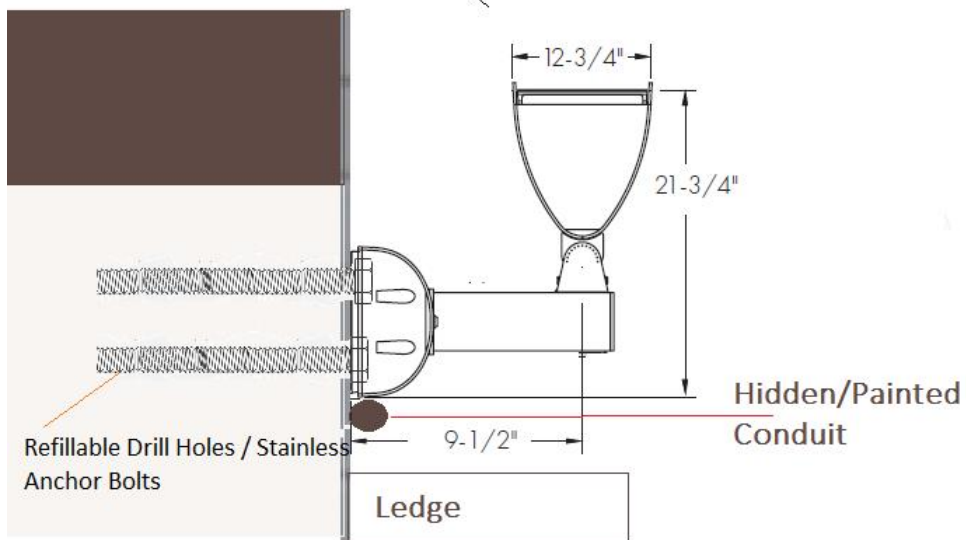
Fixtures Painted To Match Building



Tile Height is 21"



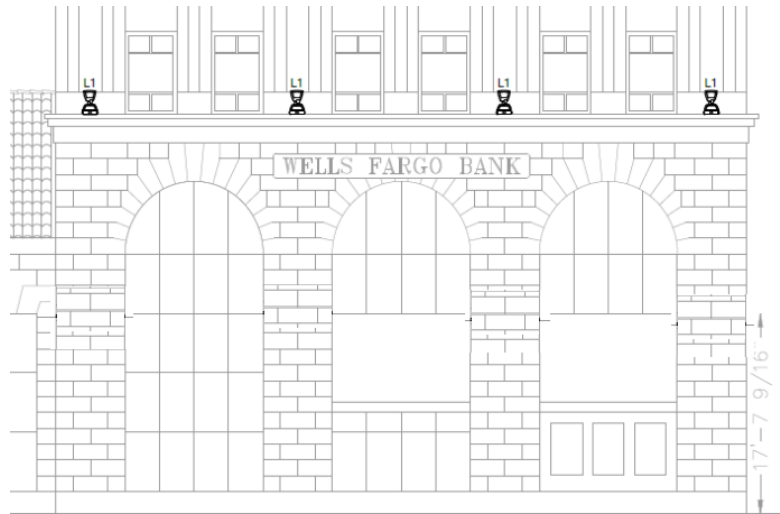
Maelisa Reed Lighting



## Maelisa Reed Lighting

### L1 - Light Fixture Mounting

The LED up light fixtures will be at the second story level on all four sides of the building. There will be no public opportunity to touch, move or vandalize these fixtures once installed.



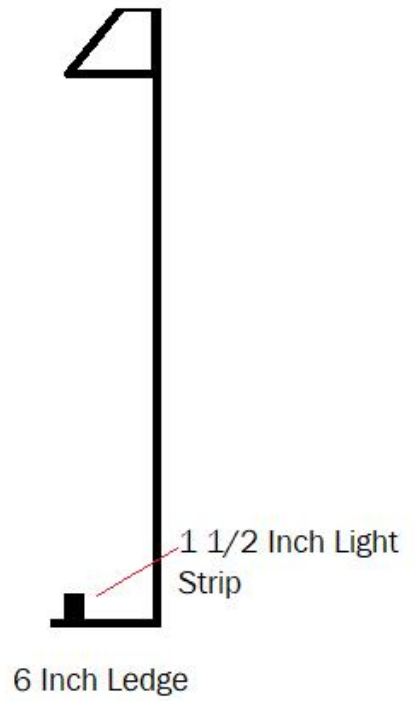
Maelisa Reed Lighting

L2 Elevation View



Maelisa Reed Lighting

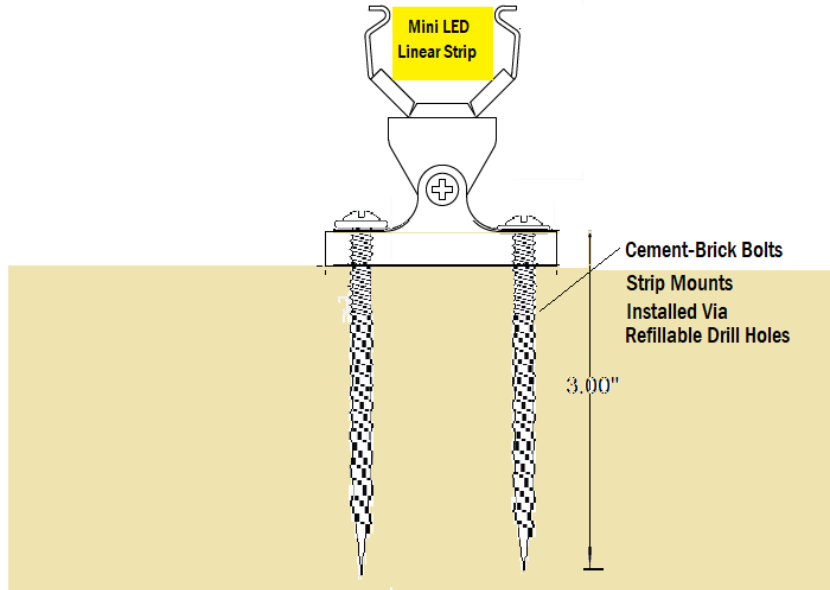
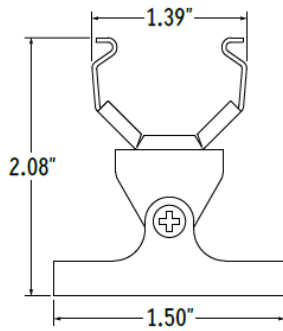
L2- Light Fixture Type Mounting Visuals



Maelisa Reed Lighting

## MOUNTING CLIPS

### L2 LINEAR CROWN AREA & L6 LINEAR ARCH AREA



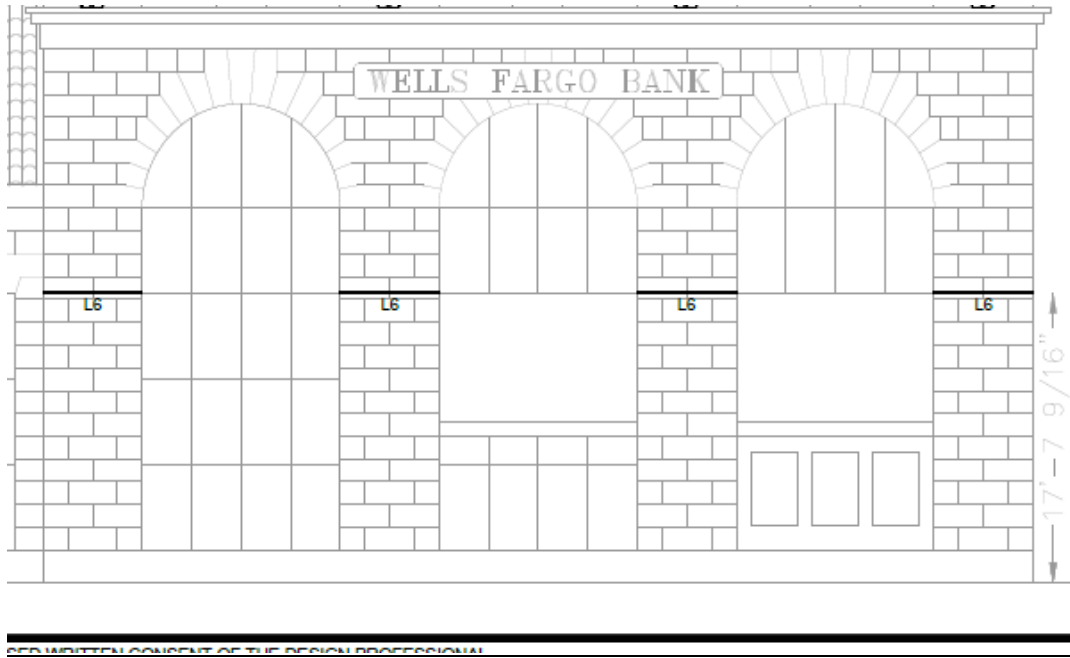
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### L2 - Light Fixture Mounting

The application of the LED linear up light fixtures will be at the top crown level mounted between window openings on all four sides of the building. There will be no public opportunity to touch, move or vandalize these fixtures once installed.

Maelisa Reed Lighting

L6 Elevation

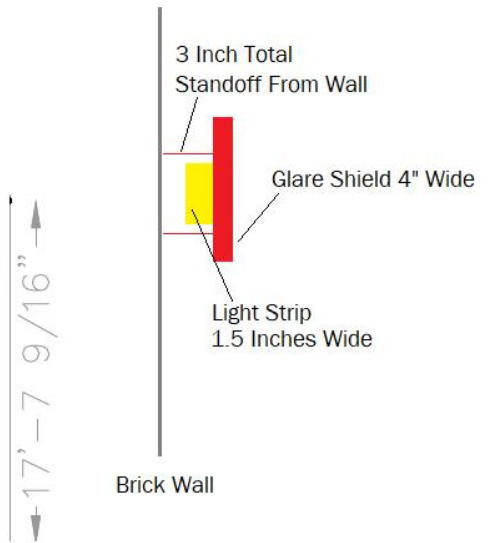


Maelisa Reed Lighting

L6- Light Fixture Type Mounting Visuals



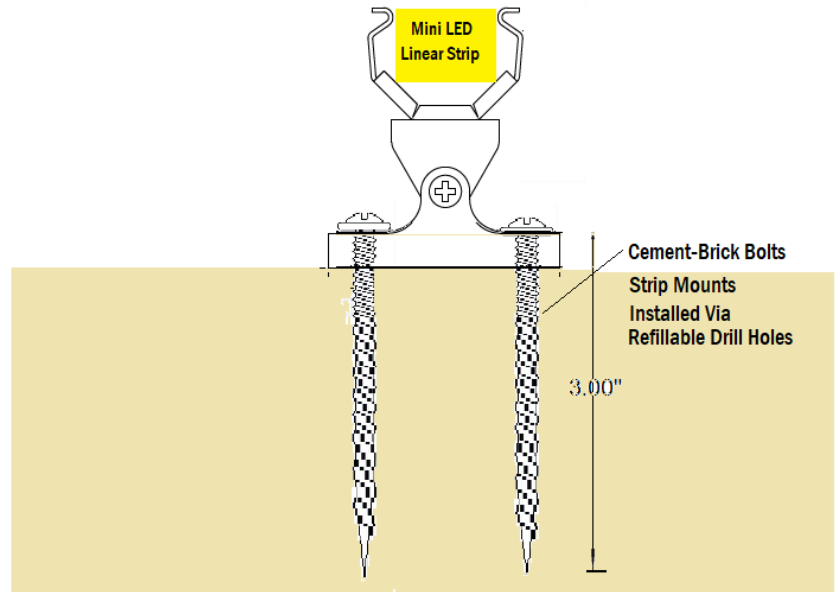
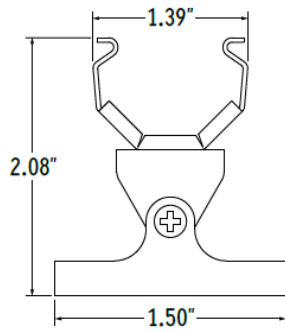
Looking Down To Mounting



Maelisa Reed Lighting

## MOUNTING CLIPS

### L2 LINEAR CROWN AREA & L6 LINEAR ARCH AREA



### L6 - Light Fixture Mounting

The application of the LED linear up light fixtures will be mounted between window openings on all four sides of the building well above pedestrian level.

There will be no public opportunity to touch, move or vandalize these fixtures once installed.



## Maelisa Reed Lighting

### Per city guidelines:

21 Building lighting, if any, should highlight signs, entrances and walkways, display windows, or outstanding architectural features. Do not use building lighting which blinks or changes.

Our proposed lighting program will highlight the richness of the architects' thoughtful design, bring attention to the appeal of this buildings design features and will enhance the overall experience of the historical area. Our fixtures are static soft-glow light with zero ability to blink or flash.

22 Conceal all electrical boxes and conduits from view, and position light sources to prevent glare for pedestrians and vehicles.

Our careful planning of the installation includes hiding and painting any conduits as well as the painting of the light fixtures to seamlessly blend into the fascia. Each of the high-end light fixtures was selected for its highly controllable light glare control and glare diffuser trims. The lighting design placement is intended to hide the source of the light and light only the building as to not disturb neighboring business, vehicles or pedestrians.

### S1 Retain and repair original building elements

All building elements will be left in their original form except for single drill holes for anchor bolts that could be simply filled and painted should any future owner wish to remove the light fixtures. No other hardware shall be applied.

S2 New or replacement elements should visually match the original as closely as possible.

There are no existing lighting elements to match

1 Provide lighting at building entrances and for security at ground level.

## Maelisa Reed Lighting

Our new lighting design plan enhances the lumens at ground level

2 Provide accent lighting to highlight interesting architectural features.

Each fixture and placement are intended to highlight perfectly the splendor of this architect's work and the materials used to create the building design.

3 Design and locate light fixtures which coordinate with and complement the architectural style of the building.

The light fixtures on this particular project are intended to disappear by day and blend into the facade.

4 Lighting should be integral to the design of the building or site.

The light fixtures on this particular project are intended to disappear by day and blend into the facade.

5 Shield lighting to avoid direct glare into adjacent uses.

Each of our intended fixtures offers shielding and glare lenses to protect the surrounding environment.

## EQUIPMENT

1 Building equipment, including air conditioning units, pipes, ducts, meters, transformers and dumpsters must be enclosed, buried, or otherwise concealed from public view, including views from nearby buildings.

All materials used in installation will be hidden and painted to blend into the facade to disappear from neighboring buildings. All fixtures and mountings are above pedestrian view as well.