

APPROVED

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BOARD OF RECREATION AND PARK COMMISSIONERS

BOARD REPORT

NO. 20-163

DATE August 20, 2020

C.D. 1

BOARD OF RECREATION AND PARK COMMISSIONERS

SUBJECT: HIGHLAND PARK RECREATION CENTER – SPORTS COURT LIGHTING (AKA PROPOSITION K SPORTS LIGHTING IMPROVEMENTS: HIGHLAND PARK RECREATION CENTER) (PRJ21328) (W.O. #E170505) PROJECT - FINAL ACCEPTANCE

AP Diaz _____	<i>for</i> S. Piña-Cortez _____
H. Fujita _____	C. Santo Domingo <i>DF</i> _____
V. Israel _____	N. Williams _____

M. Shue

 General Manager

Approved X Disapproved _____ Withdrawn _____

RECOMMENDATION

Accept the work performed by Electro Construction Corporation for the Highland Park Recreation Center – Sports Court Lighting (AKA Proposition K Sports Lighting Improvements: Highland Park Recreation Center) (PRJ21328) (W.O. #E170505) Project (Project), as outlined in the Summary of this Report.

SUMMARY

The Project is located in Council District 1, at 6150 Piedmont Avenue, Los Angeles, California 90042. The scope of work consisted of replacing existing lighting for two (2) full-court and two (2) half-court basketball courts with new Light Emitting Diode (LED) lighting fixtures. Plans for the Project were prepared by the Department of Recreation and Parks' (RAP) Planning, Construction, and Maintenance Branch. The Board of Recreation and Park Commissioners (Board) approved the final plans on July 17, 2019 (Report No. 19-143). On October 25, 2019, a Notice-To-Proceed, in the amount of Twenty Thousand, Eight Hundred Eleven Dollars (\$20,811) was issued to Electro Construction Corporation.

During the course of construction, only one (1) Change Order was issued for the Project, in the amount of One Thousand, Eight Hundred Eighty-Three Dollars (\$1,883) or 9% of the base award amount. This single change order was attributed to the additional scope requested by RAP for adding electronic communication hardware to track and monitor the energy usage of the new LED lights.

Vendor	Original Award Amount	Change Order Amount	Total Amount
Electro Construction Corporation	\$20,811.00	\$1,883.00	\$22,694.00

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RAP and BOE staff have reviewed the as-built plans and concur that the Project has been completed in accordance with the plans and specifications. There were no contract compliance or labor issues with the work done.

TREES AND SHADE

As detailed in Report No. 19-143, no trees were removed as this Project only focused on improving the lighting for evening recreation activities, additional trees and shade structures were also not part of the scope. Furthermore, the approved Proposition K funds did not include funds for the installation of shade structures and trees.

ENVIRONMENTAL IMPACT

This Project was previously evaluated for environmental impact in accordance with the California Environmental Quality Act (CEQA), and the Board determined that it is categorically exempt from the provisions of CEQA (Report No. 19-143). RAP Staff has determined that this Project and the environmental conditions of the site have not substantially changed since the previous evaluation. Therefore, no additional CEQA documentation is required.

FISCAL IMPACT

There is no immediate fiscal impact to RAP's General Fund. The Project should reduce long term maintenance and operation costs, due to replacement of existing and high energy consumption of sports court lighting systems with new and energy efficient LED lighting systems.

STRATEGIC PLAN INITIATIVES AND GOALS

Approval of this Board Report advances RAP's Strategic Plan by supporting:

- Goal No. 5:** Ensure an environmentally sustainable park system
Outcome No. 1: Decreased energy consumption and achieve a smaller carbon footprint
- Result:** The installation of new LED light fixtures at the basketball courts will decrease energy consumption leading to a more sustainable park.

This Report was prepared by Erick Chang, Project Manager, and reviewed by Neil Drucker, Prop K Program Manager, BOE; and Darryl Ford, Superintendent, Planning, Construction and Maintenance Branch, Department of Recreation and Parks.

LIST OF ATTACHMENTS

- 1 – Change Order Log
- 2 – Report No. 19-143

HIGHLAND PARK RC Sports Lighting (W.O.# E170505)
Change Order Log

NO	SCOPE OF OF WORK	CHANGE ORDER AMOUNT	TYPE
1	Adding electronic communication hardware for monitoring energy usage	\$ 1,883.00	additional scope
	Total Amount:	\$ 1,883.00	

SUMMARY BY TYPE	AMOUNT	Percentage
additional scope	\$ 1,883.00	9.0%
Total Amount:	\$ 1,883.00	9.0%

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BOARD OF RECREATION AND PARK COMMISSIONERS

BOARD REPORT

NO. 19-143

DATE July 17, 2019

C.D. 1

BOARD OF RECREATION AND PARK COMMISSIONERS

SUBJECT: HIGHLAND PARK RECREATION CENTER - SPORTS COURT LIGHTING (AKA PROPOSITION K SPORTS LIGHTING IMPROVEMENTS: HIGHLAND PARK RECREATION CENTER) (W.O. #E170505) PROJECT – APPROVAL OF FINAL PLANS; CATEGORICAL EXEMPTION FROM THE PROVISIONS OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) PURSUANT TO ARTICLE III, SECTION 1, CLASS 1(1) [MINOR EXTERIOR ALTERATION OF EXISTING PUBLIC STRUCTURES INVOLVING MINOR CONSTRUCTION], CLASS 1(4) [REHABILITATION OF DETERIORATED STRUCTURES TO MEET CURRENT STANDARDS OF PUBLIC SAFETY] AND CLASS 1(12) [OUTDOOR LIGHTING FOR SECURITY AND OPERATION] OF CITY CEQA GUIDELINES AND ARTICLE 19, SECTION 15301(d) OF CALIFORNIA CEQA GUIDELINES..

AP Diaz
H. Fujita
V. Israel

S. Piña-Cortez

C. Santo Domingo

N. Williams

John J. Fox
General Manager

Approved X

Disapproved _____

Withdrawn _____

RECOMMENDATIONS

1. Approve the final plans and specifications, substantially in the form on file in the Board Office, for the Highland Park Recreation Center - Sports Court Lighting (AKA Proposition (Prop) K Sports Lighting Improvements: Highland Park RC) (W.O. #E170505) Project (Project);
2. Find the that proposed Project is Categorically Exempt from the California Environmental Quality Act (CEQA), pursuant to Article III, Section 1, Class 1(1) [Minor Exterior Alteration of Existing Public Structures Involving Minor Construction], Class 1(4) [Rehabilitation of Deteriorated Structures to Meet Current Standards of Public Safety] and Class 1(12) [Outdoor Lighting for Security and Operation] of City CEQA Guidelines and to Article 19, Section 15301(d) of California CEQA Guidelines, and direct Staff to file a Notice of Exemption (NOE) with the City and the Los Angeles County Clerk's Office; and,
3. Authorize Department of Recreation and Park's (RAP) Chief Accounting Employee or Designee to make technical corrections as necessary to carry out the intent of this Report.

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SUMMARY

Highland Park Recreation Center is located at 6150 Piedmont Avenue, in the Highland Park community of the City. This 5.41 acre park provides a gymnasium, swimming pool and bathhouse, basketball courts, children’s play area and ball fields. Approximately 7,939 residents live within a half-mile (1/2) walking distance of the recreation center.

The Highland Park Recreation Center - Sports Court Lighting (AKA Prop K Sports Lighting Improvements: Highland Park RC) (W.O. #E170505) Project (Project) is a Proposition K – L.A. for Kids Program Competitive Grant funded project.

The Highland Park Recreation Center - Sports Court Lighting (AKA Prop K Sports Lighting Improvements: Highland Park RC) (W.O. #E170505) Project scope of work consists of replacing existing lighting at two (2) full-court and two (2) half-court basketball courts with new, high efficiency, Light Emitting Diode (LED) light fixtures. This will provide an improved quality of lighting, with reduced spillover of light onto adjacent properties and/or other areas of the recreation center. The new LED light fixtures will also reduce operational costs, by reducing energy consumption relative to current electrical usage.

After review by RAP and the Department of Public Works, Bureau of Engineering (BOE), it was determined that the work can be performed by RAP pre-qualified on call contractors. RAP Staff recommends the Project to be constructed by the on call contractors and that BOE to provide construction management services during the construction of these improvements.

RAP’s Planning, Construction, and Maintenance Branch prepared the plans, specifications, and obtained all the necessary permits for the project. As required by the Proposition K guidelines, three (3) Local Volunteer Neighborhood Oversight Committee (LVNOC) meetings were conducted. The first LVNOC meeting was held on December 14, 2016. The second LVNOC meeting was held on March 14, 2017. The third LVNOC meeting was held on April 19, 2017. The community, LVNOC members, and Office of Council District 1 are in full support of the project.

Sufficient funds are available for the construction and construction contingencies form the following funds and accounts:

<u>FUNDING SOURCE</u>	<u>FUND/DEPT./ACCT. NO.</u>
Proposition K	43K/10/10NPFA

TREES AND SHADE

The proposed Project does not require any trees removal. Existing trees near the location of proposed new lighting fixtures will be protected during the construction period. Since this project focuses on improving lighting for evening recreation activities, additional trees and shade structures are not part of the scope. Furthermore, the approved Proposition K funds for this project do not include funding for installation of shade structures and/or trees.

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ENVIRONMENTAL IMPACT

The proposed Project consists of minor construction work to replace existing lighting with new LED lighting fixtures for security reasons. As such, RAP staff recommends that the Board of Recreation and Park Commissioners determines that the project is exempt from the provision of the California Environmental Quality Act (CEQA) pursuant to Article III, Section 1, Class 1(1),(4),(12) of City CEQA Guidelines and Article 19, Section 15301(d), of California CEQA Guidelines.

FISCAL IMPACT

There is no immediate fiscal impact to RAP's General Fund. When completed, the Project should reduce long term maintenance and operational costs, due to replacement of existing and high energy consumption of sports court lighting systems with new and energy efficient LED lighting systems.

STRATEGIC PLAN INITIATIVES AND GOALS

Approval of this Board Report advances RAP's Strategic Plan by supporting:

Goal No.5: Ensure an environmentally sustainable park system
Outcome No. 1: Decreased energy consumption and achieve a smaller carbon footprint
Target:
100 by 2022

This Report was prepared by Erick Chang, Project Manager, BOE Architectural Division. Reviewed by Neil Drucker, Interim Division Manager, BOE Architectural Division, and Darryl Ford, Superintendent, Planning, Maintenance and Construction Branch.

LIST OF ATTACHMENT

Final plans and specifications

**DEPARTMENT OF RECREATION AND PARKS
CITY OF LOS ANGELES**

PROP K SPORTS LIGHTING IMPROVEMENT: HIGHLAND PARK RC

ELECTRICAL SPECIFICATIONS

DIVISION 1.
GENERAL PROVISIONS FOR DEPARTMENT OF RECREATIONS AND PARKS AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTIONS. THE LOS ANGELES CITY ELECTRICAL CODE (LATEST EDITION) ARE MADE A PART OF THESE PLANS AND SPECIFICATIONS.

WHERE CONFLICTS OCCURS BETWEEN DIVISION 1 DEPARTMENT OF RECREATION AND PARKS AND THE SSPWC, THE DIVISION 1 DEPARTMENT OF RECREATION AND PARKS DEPARTMENT SHALL TAKE PRECEDENCE. CATALOG SPECIFICATIONS WHEN DESCRIBED BY MODEL NUMBER ARE HEREBY MADE A PART OF THESE SPECIFICATIONS. WHERE OPTIONS FOR MATERIALS AND OR METHODS APPEARS IN THE STANDARD SPECIFICATIONS, OR THE LOS ANGELES ELECTRICAL CODE, THE OPTION DEFINED HEREIN SHALL BE USED. ANY DISCREPANCIES SHALL BE RESOLVED WITH THE FINAL DECISION MADE BY THE GENERAL MANAGER OF THE DEPARTMENT OF RECREATION AND PARKS OR AUTHORIZED REPRESENTATIVE.

1. GENERAL SCOPE OF WORK:

WORK IN THIS CONTRACT: ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE LIGHTING AND ELECTRICAL DISTRIBUTION SYSTEM. COMPLETE AND READY FOR USE, IN ACCORDANCE WITH THESE CONTRACT DRAWINGS AND THESE SPECIFICATIONS.

2. CLEANING, INSTALLATION AND REMOVAL OF RUBBISH:

BESIDES THE GENERAL CLEANING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THE FOLLOWING SPECIAL CLEANING FOR ALL TRADES SHALL BE DONE AT THE COMPLETION OF THE WORK AND DURING INSTALLATION.

(A) CLEAN ALL ELECTRICAL EQUIPMENT AND DEVICES. REMOVE STAINS, DUST, DIRT, PLASTER, PAINT AND ETC.

(B) REMOVE ALL SPOTS, SOILS, PLASTERS AND PAINTS FROM ALL EXISTING WORK AND CLEAN TO ORIGINAL CONDITION.

(C) PROTECT AND CLEAN ALL FIXTURES AND EQUIPMENT.

3. CONSTRUCTION WATER, LIGHT AND POWER:

(A) THE DEPARTMENT WILL FURNISH AT NO COST TO CONTRACTOR WATER AND ELECTRICITY AS IT EXIST ON THE SITE. CONTRACTOR SHALL FURNISH AND MAINTAIN ALL TEMPORARY LINES, FIXTURES AND EQUIPMENT FOR WATER AND ELECTRICITY AND REMOVE SAME AT COMPLETION OF WORK AT HIS/HER OWN EXPENSE.

(B) THE DEPARTMENT WILL NOT BE HELD RESPONSIBLE FOR FAILURE OF EXISTING SOURCES TO SUPPLY CONTINUOUS WATER AND POWER, NOR WILL THE DEPT. BE HELD RESPONSIBLE FOR THE EXISTING SOURCES TO SUPPLY ADEQUATE DEMAND AS REQUIRED BY THE CONSTRUCTION OF THIS WORK.

4. MAIN SERVICE:

(A) REQUIRED:

1. UNDERGROUND SERVICE CONDUIT FOR LIGHT AND POWER FROM MAIN SWITCHBOARD TO PROPERTY LINE AS DIRECTED BY THE DEPARTMENT OF WATER AND POWER.

2. INSTALLATION OF CURRENT TRANSFORMER IN SWITCHBOARD. THE TRANSFORMER TO BE FURNISHED BY THE DEPARTMENT OF WATER AND POWER.

(B) NOT INCLUDED IN CONTRACT:

1. UNDERGROUND SERVICE CONDUITS FROM PROPERTY LINE TO UTILITY SOURCE TO BE INSTALLED BY THE DEPARTMENT OF WATER AND POWER AND TO BE PAID FOR BY THE CITY.

2. MAIN SERVICE UNDERGROUND CONDUCTORS FROM UTILITY SOURCE TO MAIN SWITCHBOARD.

3. CURRENT TRANSFORMERS FOR SWITCHBOARD.

4. SERVICE CONNECTIONS TO TRANSFORMERS AND METERS.

5. METERS.

6. EXCESS CABLE CHARGES TO BE PAID BY THE CITY.

5. MAIN SWITCHBOARD:

(A) TYPE:

NEMA 1 FLOOR STANDING ENCLOSURE. DEAD FRONT, DEAD REAR, WITH ALL BUSSING, WIRING AND CONNECTIONS ACCESSIBLE FROM THE FRONT, ARRANGED IN ACCORDANCE WITH WIRING DIAGRAMS AND APPROVED SHOP DRAWINGS AS MANUFACTURED BY SQUARE D, OR EQUIVALENT CHALLENGER MODEL OR EQUAL.

(B) CONSTRUCTION:

1. ALL BUSSING MATERIALS SHALL BE TIN PLATED COPPER PER NEMA STANDARDS.

2. VERTICAL SECTIONS SHALL HAVE FULL HEIGHT BUSSING AND WHERE SPACES FOR FUTURE USE DEVICES ARE SHOWN ON THE DRAWINGS. ALL THE NECESSARY MOUNTING HARDWARE AND PROVISIONS SHALL BE FURNISHED.

(C) SERVICE SECTION:

SHALL CONTAIN FIXED POSITION MAIN CIRCUIT BREAKER EQUIPPED WITH PROVISIONS FOR UTILITY COMPANY METERING IN STRICT ACCORDANCE WITH THE DEPARTMENT OF WATER AND POWER REQUIREMENTS. THE MAIN CIRCUIT BREAKER SHALL BE TRIP FREE, THERMAL MAGNETIC, MOLDED CASE TYPE, BY SQUARE D TYPE LAL 42,000 AIC RMS SYMMETRICAL OR EQUIVALENT CHALLENGER MODEL OR EQUAL.

THERE SHALL BE MEANS TO LOCK EACH MAIN CIRCUIT BREAKER IN THE OPEN POSITION WITH A PADLOCK. THE DEPARTMENT OF WATER AND POWER WILL FURNISH THE LOCK AND OPEN THE MAIN BREAKER WHEN REQUIRED BY STATION MAINTENANCE OR REPAIR.

(D) DISTRIBUTION SECTION:

SHALL CONTAIN THERMAL-MAGNETIC MOLDED CASE CIRCUIT BREAKER OF THE REQUIRED VOLTAGE & AMPERAGE WITH A MINIMUM 25,000 RMS SYMMETRICAL SHORT CIRCUIT INTERRUPTING CAPACITY BY SQUARE D, TYPE LAL, OR EQUIVALENT CHALLENGER MODEL OR EQUAL, UNLESS NOTED OTHERWISE ON THE PLAN.

(E) CURRENT AND POTENTIAL TRANSFORMERS:

SHALL BE PROVIDED BY THE DEPARTMENT OF WATER AND POWER AND SHALL BE MOUNTED IN THE SWITCHBOARD BY THE CONTRACTOR SO AS TO BE ACCESSIBLE. PROVISIONS SHALL BE FURNISHED FOR EXTERNAL TESTING OF ALL LINE CURRENTS AND VOLTAGE COMPLETE WITH TEST BLOCKS AND PLUGS.

(F.) IDENTIFICATION:

ENGRAVE LAMINATED PLASTIC NAMEPLATES TO BE PROVIDED FOR EACH DEVICE ON THE SWITCHBOARD. NAMEPLATES TO BEAR THE DESIGNATION OF THE LOAD CONTROLLED.

(G.) TIGHTEN CONNECTORS AND TERMINALS, INCLUDING SCREWS AND BOLTS IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S PUBLISHED TORQUE TIGHTENING VALUES FOR EQUIPMENT CONNECTORS. WHERE MFRS. TORQUING REQUIREMENTS ARE NOT INDICATED, USE TIGHTENING TORQUES SPECIFIED IN UL STANDARD 486A.

(H.) MOUNTING INDOOR TYPE:

SECURELY BOLTED TO FLOOR AND WALL AND PLUMB AND SQUARE. PROVIDE 4" RAISED CONCRETE SLAB FOR MOUNTING SWITCHGEAR LOCATED ON THE GROUND FLOOR. DIMENSION OF RAISED CONCRETE SLAB TO BE THE SAME AS THE SWITCHGEAR.

(I.) MOUNTING OUTDOOR TYPE:

SHALL BE NEMA 3R, GAUGE 10 METAL ENCLOSURE UNLESS NOTED OTHERWISE ON THE PLAN.

(J.) SHOP DRAWINGS:

BEFORE ANY FABRICATION OF SWITCHGEAR IS BEGUN, SHOP DRAWINGS INDICATING THE MATERIALS AND DETAILS OF CONSTRUCTION AND EQUIPMENT AND UL LISTING SHALL BE APPROVED BY THE DEPARTMENT OF WATER AND POWER PRIOR TO THEIR SUBMITTAL TO THE DEPT. OF RECREATION AND PARKS.

(K.) GROUNDING:

PROVIDE AND INSTALL A DRIVEN GROUND COPPER ROD 5/8" IN DIAMETER BY 10 FT. LONG FOR SERVICE GROUNDING REQUIREMENTS LOCATED INSIDE THE ENCLOSURE. ALSO PROVIDE AND USE OTHER GROUNDING ELECTRODES AS INDICATED ON PLAN OR AS REQUIRED BY CODE. EACH ELECTRODE SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM. THE BONDING JUMPER SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CODE, ARTICLE 250. TIGHTEN CONNECTORS TO COMPLY WITH TIGHTENING TORQUES SPECIFIED IN UL STD. 486 TO ASSURE PERMANENT AND EFFECTIVE GROUND.

6. PANELBOARDS:

(A) PANELBOARDS SHALL BE CIRCUIT BREAKER TYPE WITH BOLT-ON TYPE, TRIP FREE CIRCUIT BREAKERS. PANELBOARDS SHALL BE FURNISHED WITH COPPER BUSSING AND MAIN LUGS OR MAIN BREAKER AND ALL BRANCH CIRCUIT BREAKER AS INDICATED ON THE SCHEDULES. EACH BRANCH CIRCUIT BREAKERS SHALL HAVE PERMANENT TYPE PLASTIC OR METAL NUMBERS TO IDENTIFY THE CIRCUIT PROTECTED. MIN. SIZE SHALL BE 20" W X 5 3/4" D, HEIGHT AS REQUIRED. PANELBOARD SHALL BE SQ. D, TYPE NQDB OR EQUIVALENT CHALLENGER MODEL OR EQUAL.

(B) IDENTIFICATION SHALL HAVE ENGRAVED LAMINATED PLASTIC NAMEPLATES. SCHEDULES SHALL BE TYPED WRITTEN AND SHALL DESIGNATE THE AREA OR EQUIPMENT SERVED BY EACH CIRCUIT MOUNTED IN A CARD HOLDER ON THE INSIDE OF THE DOOR AND COVERED WITH GLASS OR CLEAR PLASTIC.

(C) SHOP DRAWINGS ARE REQUIRED. THEY SHALL INDICATE ALL THE DETAILS OF CONSTRUCTION AND EQUIPMENT. ALL ITEMS SUBMITTED FOR INSTALLATION SHALL BEAR A UL LABEL AND LISTED FOR THE PURPOSE.

(D) CIRCUIT BREAKERS SHALL HAVE A MINIMUM OF 10,000 AMPS RMS SYMMETRICAL FOR 120/240 VOLTS AND 22,000 AMPS FOR 277/480 VOLTS SYSTEM UNLESS NOTED ON THE PLAN.

(E) MOUNTING SHALL BE FLUSH WITH SURROUNDING WALLS UNLESS SPECIFICALLY NOTED TO BE SURFACE MOUNTED ON THE PLAN. MAXIMUM HEIGHT OF THE HIGHEST CIRCUIT BREAKER OR CONTROL DEVICES SHALL NOT BE MORE THAN 6 FT. ABOVE THE SURROUNDING FINISH FLOOR.

(F.) TIGHTEN CONNECTORS AND TERMINALS INCLUDING SCREWS AND BOLTS IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S PUBLISHED TORQUE TIGHTENING VALUES FOR EQUIPMENT CONNECTORS. WHERE MANUFACTURER'S TORQUING REQUIREMENTS ARE NOT INDICATED, TIGHTEN CONNECTORS AND TERMINALS TO COMPLY WITH TIGHTENING TORQUE SPECIFIED IN UL STANDARDS 486 A & B.

7. RAINPROOF ENCLOSURES FOR SWITCHBOARD AND/OR PANELBOARDS. SEE DETAIL DWG.

(A) RAINPROOF ENCLOSURE FOR OUTDOOR INSTALLATION SHALL BE FREE STANDING NEMA TYPE 3R GAUGE 10 CONSTRUCTION (EXCEPT GAUGE 12 STAINLESS STEEL FOR IRRIGATION CONTROLLER SERVICE) ENCLOSURE OF SUITABLE DIMENSION. ALL BOLT HEADS EXPOSED ON THE EXTERIOR OF ENCLOSURE SHALL BE ROUND HEAD GALVANIZED TYPE BY HOFFMAN ENGINEERING CO. (213) 862-2145 OR PICCO METAL PRODUCTS INC. (310) 944-0626 OR EQUAL.

(B) DOORS SHALL BE CUSTOM EQUIPPED WITH STRONG PADLOCKABLE STEEL COVER TO PROTECT THE OPERATING HANDLES. PAD LOCKABLE COVERS SHALL ACCOMMODATE THE DEPARTMENT OF RECREATION AND PARKS LOCKS. PROVIDE TOP AND BOTTOM DOOR LOUVERS.

(C) MOUNTING: OUTDOOR TYPE SHALL BE SECURELY BOLTED TO A STEEL REINFORCED CEMENT CONCRETE PAD EXTENDING 12 INCHES BEYOND THE PANEL ENCLOSURE IN BOTH LENGTH AND WIDTH DIMENSIONS AND 36 INCHES IN FRONT OF PANEL ENCLOSURE. THE PAD SHALL EXTEND 6" ABOVE AND 6" BELOW FINISHED GRADE. REINFORCING STEEL SHALL BE #4 REBAR LAID LENGTHWISE AND CROSSWISE 6" O.C. WITH 3 INCH CLEAR COVER TO SUBGRADE, AND SECURELY TIED AT EACH POINT OF CONTACT.

(D) LIGHTS AND RECEPTACLES: PROVIDE AND INSTALL A SURFACE MOUNTED INCANDESCENT FIXTURE, WP WALL SWITCH AND A 20 AMP RATED GFI TYPE RECEPTACLE INSIDE THE ENCLOSURE FED FROM ONE 20A-1P CIRCUIT BREAKER WIRED WITH 2#12 THHN/THWN CU IN 3/4" CONDUIT.

8. CONTROLS:

(A) TYPES

1. CIRCUIT BREAKERS - SHALL BE THERMAL MAGNETIC. EACH BREAKER SHALL BE EQUIPPED WITH A DEVICE FOR INDIVIDUAL PADLOCKING.

2. TIME SWITCHES - SHALL BE PARAGON MODEL NO. EC72ST SUN TRACKER ELECTRONIC LIGHTING CONTROL. CONTROL SHALL HAVE AN ASTRO-DIAL, TWO CHANNEL FEATURE, SKIP-A-DAY, OFFSET TO SUNRISE AND/OR SUNSET AND MANUAL OVERRIDE INDEPENDENTLY PROGRAMMABLE FOR EACH CHANNEL. IT SHALL BE SURFACE MOUNTABLE OR SHALL BE IN NEMA 3R FOR OUTDOOR INSTALLATION (EC72ST-N3).

3. LIGHT SWITCH TIMER - SHALL BE PARAGON MODEL NO. ET1100 SERIES. IT SHALL BE SOLID STATE WITH ADJUSTABLE TIMER RANGE FROM ONE MINUTE TO 18 HOURS. THE CONTROL SHALL BE TAMPER-PROOF WITH OUT-OF-SIGHT PROGRAMMING DIAL. THE CONTROL SHALL BE RATED UP TO 1100 WATTS AND CAPABLE OF OPERATING BETWEEN 24 VAC AND 277 VAC.

4. LOCAL SWITCHES - SHALL BE SPECIFICATION GRADE, HUBBELL 1221-I SERIES OR EQUIVALENT LEVITON MODEL OR EQUAL.

5. LIGHTING CONTACTORS - AMPERE RATING, NUMBER OF POLES, LINE VOLTAGE, CONTROL VOLTAGE, MOMENTARY OR MAINTAINED CONTACT AS INDICATED ON DRAWINGS, OR AS REQUIRED, SQUARE D CLASS 8903, OR EQUIVALENT AUTOMATIC SWITCH CO. MODEL OR EQUAL.

6. PUSH BUTTON STATIONS - HEAVY DUTY CONTROL STATIONS, LOCATE IN RECREATION DIRECTORS OFFICE (UNLESS OTHERWISE INDICATED) FOR REMOTE CONTROL OF FIELD LIGHTING. SQUARE D CLASS 9001, TYPE B IN NEMA 4 ENCLOSURE FOR OUTSIDE INSTALLATION OR EQUIVALENT FURNAS MODEL OR EQUAL. LOCATE PUSH BUTTON AS SPECIFIED ON THE PLAN OR DETAIL.

(B) IDENTIFICATION - ALL CONTROL DEVICES SHALL BE IDENTIFIED BY ENGRAVED PLATES DESIGNATING THE EQUIPMENT CONTROLLED, MOTORS AND EQUIPMENT SHALL BEAR NEAT, LEGIBLE AND PERMANENT IDENTIFICATION CORRESPONDING WITH THAT ON THE CONTROL DEVICES USING ENGRAVED LAMINATED PLASTIC NAMEPLATES AFFIXED WITH A MINIMUM OF TWO ESCUTCHEON PINS OR SCREWS.

(C) LOCATIONS - FOR OUTDOOR INSTALLATION, TIME SWITCHES AND CONTACTORS SHALL BE LOCATED IN A SEPARATE PARTITIONED SPACE INSIDE THE RAINPROOF ENCLOSURE, OR AS INDICATED IN THE PLAN.

9. BOXES:

(A) TYPES: WEATHERPROOF CAST BOXES FOR OUTDOOR AND SURFACE WIRING AND WHERE INDICATED ON THE DRAWINGS BY SYMBOL "WP", CROUSE-HINDS FD OR RUSSELL-STOLL FD SERIES OUTLET BOXES OR EQUAL. CONCRETE PULL BOX WITH BOLT DOWN STEEL COVER IS PERMITTED FOR UNDERGROUND INSTALLATION. BROOKS PRODUCT MODEL SPB OR EQUAL, OR AS INDICATED ON THE PLAN.

(B) ACCESSORIES: WEATHERPROOF FOR CROUSE-HINDS FD SERIES OUTLET BOXES OR RUSSELL-STOLL FD SERIES OR EQUAL.

(C) UNDERGROUND PULL BOXES. AVOID INSTALLATION AT THE LOWEST SPOT OF THE SURROUNDING AREAS. PULL BOX SHOULD SEAT ON 2"X4" FRAMED REDWOOD AND SHALL HAVE AT LEAST 12" LAYER OF PEA GRAVEL BENEATH THE BOX.

10. RECEPTACLES:

(A) TYPES: ALL RECEPTACLES SHALL BE SPECIFICATION GRADE AND SHALL MEET NEMA WD-1-1974 TESTS.

(B) FLUSH WALL TYPE, HUBBELL 5262-1, 15 AMPERE, 125 VOLTS OR HUBBELL 8300-1 20 AMPERE, 125 VOLTS, OR EQUIVALENT LEVITON MODEL OR EQUAL.

(C) SHALL BE SCREW-TERMINAL TYPE. NO PUSH-IN TYPE CONNECTIONS ARE PERMITTED.

11. OUTLET PLATES:

(A) SHALL BE STAINLESS STEEL FOR ALL RECEPTACLE AND LIGHT SWITCH, SIGNAL AND COMMUNICATION OUTLETS.

(B) SHALL BE ENGRAVED PLATES FOR SPECIAL EQUIPMENT, MOTORS, VOLTAGE OTHER THAN 120 VOLT AND GANGED SWITCHES.

12. INSTALLATION OF POLES:

(A) TYPE SHALL BE ROUND TAPERED GALVANIZED STEEL UNLESS OTHERWISE INDICATED. POLE HEIGHT SHALL BE 30' UNLESS NOTED ON THE PLAN.

(B) ERECTION: IN ACCORDANCE WITH APPROVED SHOP DRAWINGS, PLUMB AND PROPERLY ALIGNED. BASE PLATES SHALL BE GROUTED USING AN APPROVED STANDARD COMMERCIAL NON-SHRINK GROUTING MORTAR WITH L.A. RESEARCH REPORT NUMBER. THE NON-SHRINK MORTAR SHALL BE HELD BACK ONE INCH FROM EDGES OF BASE PLATES, AND THE SPACE THEN FILLED WITH GROUT COMPOSED OF ONE PART LOW ALKALI PORTLAND CEMENT TO TWO PARTS WASHED SAND, BEVELLED AND TRAVELED SMOOTH. EXPOSED SURFACES OF MORTAR SHALL BE WATER CURED WITH WET BURLAP FOR SEVEN DAYS.

(C) GROUNDING: SECURELY GROUND ALL PARKING LOT LIGHTING POLES WITH APPROVED GROUNDING BUSHINGS AND GROUNDING CLAMPS.

(D) CONDUITS ENTERING AND/OR LEAVING POLE FOOTING SHALL BE RIGID PVC COATED STEEL WITH PLASTIC BUSHING. MAKE TRANSITION FROM PVC TO METALLIC AT A MINIMUM DISTANCE OF 3'-0" FROM FOOTINGS.

(E) TACK WELDING OF NUTS TO WASHER AND WASHER TO BASE PLATE IS REQUIRED.

13. CONDUIT:

(A) REQUIRED: ALL WIRING SHALL BE IN RIGID OR PVC COATED STEEL CONDUIT EXCEPT AS FOLLOWS:

1. PVC MAYBE USED UNDERGROUND FROM PVC COATED STEEL CONDUIT STUBS LOCATED 3 FEET OUTSIDE FOOTING LINES.

2. EMT MAYBE USED ABOVE GROUND INSIDE BUILDINGS WHERE NOT ENCASED IN MASONRY OR CONCRETE AND NOT SUBJECT TO PHYSICAL DAMAGE.

(B) TYPES:

1. RIGID STEEL CONDUIT: IN ACCORDANCE WITH USA STD C801 AND ASTM B-6.

2. ELECTRICAL METALLIC TUBING: IN ACCORDANCE WITH USA STD C80-3 & ASTM B-6.

3. PVC CONDUIT: SHALL CONFORM TO NEMA STANDARD TC-6-1967, WC-1094 AND UL STANDARD 651, 1974 HEAVY WALL SCHEDULE 40 BURIED NOT LESS THAN 24 INCHES BELOW GRADE.

4. PVC EXTERNALLY COATED RIGID STEEL CONDUIT, RIGID STEEL ZINC COATED WITH ADDITIONAL FINISH OF PVC CONFORMING TO ANSI C-80 & NEMA RNI.

(C) FITTINGS AND ACCESSORIES:

1. FOR RIGID STEEL CONDUIT: APPROVED TYPES) ERICSON COUPLING OR THREADLESS CONNECTORS FOR JOINING RUNS. GROUNDING BUSHING SHALL BE THOMAS & BETTS OR APPLETON WALLEABLE IRON INSULATED GROUNDING BUSHINGS, UL FILE E14814A. FACTORY ELLS SHALL NOT BE USED UNDERGROUND.

2. FOR ELECTRICAL METALLIC TUBING: COMPRESSION GLAND OR STEEL SET SCREW TYPE COUPLINGS AND CONNECTORS WITH INSULATED THROAT.

(D) SIZES: MINIMUM 3/4" CONDUIT UNLESS NOTED ON THE PLAN.

(E) CONCRETE COVER:

U.D.N. UNDERGROUND CONDUIT RUNS IN RECREATION AND PARKS PROPERTY INSTALLED WITH SCHEDULE 40 PVC SHALL HAVE A MINIMUM 3" TOP COVER OF CONCRETE OVER ITS ENTIRE LENGTH (EXCEPT UNDER CONCRETE SIDEWALKS), AND SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR SIZED ACCORDING TO THE PREVAILING CODE BUT NOT LESS THAN SHOWN ON THE PLAN. CONCRETE COVER SHALL BE MINIMUM OF 100-E-100 SLURRY MIX OR AS REQUIRED BY DWP.

14. CONDUIT INSTALLATION:

(A) ALL CONDUITS SHALL BE CONCEALED EXCEPT WHERE OTHERWISE INDICATED ON THE DRAWINGS.

(B) PVC COATED STEEL CONDUIT WHICH WILL BE BURIED IN THE GROUND SHALL HAVE WATER TIGHT JOINTS. JOINTS SHALL BE ASSEMBLED WITH LEAD PLATE (ANTI-SEIZE METALLIC LEAD BASE) MIL-A-907 AS MANUFACTURED BY ARMITE LABORATORIES.

(C) INSTALL EXPANSION FITTINGS IN ALL RACEWAY WHENEVER EXPANSION JOINTS ARE CROSSED. FITTINGS SHALL BE EQUAL TO 'OZ' TYPE 'XZ' OR 'TX'.

(D) NO HORIZONTAL CONDUIT SHALL BE INSTALLED IN CONCRETE SLABS-ON-GRADE. SLEEVES FOR CONDUIT PENETRATING FLOORS SHALL TERMINATE 3 INCH ABOVE THE FLOOR. CONDUITS SHALL BE PROTECTED FROM CORROSION BY ONE OF THE FOLLOWING METHODS: (EXTEND 3' ABOVE AND 3' BELOW TOP OF CONCRETE.)

1. PVC EXTERNALLY COATED STEEL CONDUIT BY ROBROY INDUSTRIES.

2. SPIRAL WRAP WITH 40 MIL HALF LAP PLASTIC TAPE.

3. PVC SLEEVE.

(E) TOPS OF UNDERGROUND CONDUIT RUNS OUTSIDE OF BUILDING OR UNDER CONCRETE SLABS SHALL NOT BE LESS THAN 24" BELOW FINISHED GRADE, NOR LESS THAN THAT REQUIRED BY THE DEPARTMENT OF WATER AND POWER. UNDERGROUND CONDUIT SHALL NOT PASS OVER TANKS OR OTHER UNDERGROUND EQUIPMENT OR THROUGH FOOTINGS EXCEPT AS DETAILED ON THE STRUCTURAL DRAWINGS.

(F) ALL CONDUIT BENDS INSTALLED UNDERGROUND SHALL BE THE LONG RADIUS TYPE WITH RADII NOT LESS THAN 10 TIMES THE INTERNAL DIAMETER OF THE CONDUIT AND WITH NOT MORE THAN TWO 90° BENDS AND ONE 45° SWEEP IN ANY RUN. EXCEPTION: FOR POWER AND LIGHT CONDUIT ABOVE GROUND, FACTORY ELLS ARE PERMITTED.

(G) EACH RUN SHALL BE TESTED IMMEDIATELY AFTER INSTALLATION TO ASSURE FREEDOM FROM OBSTRUCTION AND EACH END PLUGGED AFTER THE TESTING IS COMPLETED. A GALVANIZED IRON PULL WIRE NO. 12 AWG OR 1/8-INCH NYLON POLYPROPYLENE CORD SHALL BE INSTALLED IMMEDIATELY AFTER CONDUIT INSTALLATION IN EACH CONDUIT IN WHICH THE CONDUCTORS WILL NOT BE IMMEDIATELY INSTALLED.

(H) CONDUITS "JACK-THRU" AND/OR BORED THRU UNDERGROUND SHALL BE MINIMUM 1" RIGID STEEL CONDUIT.

1. CONDUITS IN UNDERGROUND PULL BOXES SHALL BE SEALED WITH "LHD"-1# OR 5# DUCT SEAL AS MANUFACTURED BY DOTTIE CO. OR APPROVED EQUAL.

15. CONDUCTORS:

(A) TYPE THHN/THWN, 600 VOLTS INSULATION PER UL 83 FOR ALL GENERAL WIRING SUBJECT TO TEMPERATURES AT 75°C MINIMUM, WET OR DRY LOCATIONS.

(B) TYPES:

1. COPPER WIRE FOR ALL CONDUCTORS.

2. SOLID WIRE FOR NO. 10 AWG AND SMALLER FOR GENERAL WIRING.

3. STRANDED FOR WIRES NO. 8 AWG AND LARGER OR FOR FLEXIBILITY WHERE INDICATED ON THE DRAWINGS AS FLEXIBLE CONDUIT CONNECTION.

4. NO CONDUCTORS SMALLER THAN NO. 12 AWG EXCEPT FOR CONTROL WIRES WHICH SHALL BE NO. 14 AWG OR AS INDICATED ON THE PLAN.

5. CONDUCTORS FROM BASE OF NEW OR EXISTING POLES UP TO LUMINAIRES SHALL BE NO. 10 AWG MINIMUM UNLESS OTHERWISE NOTED ON THE PLAN. PROVIDE APPROXIMATELY 18" SLACK IN HAND HOLE AND PULL BOXES.

6. FOR IRRIGATION CONTROL WIRES, REFER TO IRRIGATION SPECIFICATIONS.

(C) SPLICES:

1. BRANCH AND FEEDER CONDUCTOR JOINTS SHALL BE LOCATED ONLY IN OUTLET BOXES, FIXTURES OR PULL BOXES. CONDUCTOR JOINTS SHALL NOT BE MADE IN CONDUIT FITTINGS.

2. ALL SPLICES IN UNDERGROUND PULL BOXES SHALL BE SCOTCH BAGGED AND WATER TIGHT.

(D) COLOR CODE:

1. FOR POLYPHASE CIRCUITS, IDENTIFY EACH PHASE THROUGHOUT THE CIRCUIT WITH DESIGNATION PHASE A (BLACK), PHASE B (RED) AND PHASE C (BLUE).

2. FOR CONDUCTOR SMALLER THAN NO. 6 AWG COLOR CODING SHALL BE ACCOMPLISHED BY INHERENT INSULATION COLOR. TAGGING PAINT OR OTHER MARKINGS SHALL NOT BE USED FOR COLOR IDENTIFICATION.

(E) INSPECTION:

CONTRACTOR SHALL NOTIFY THE GENERAL MANAGER OR AUTHORIZED REPRESENTATIVE 48 HOURS PRIOR TO START OF PULLING WIRE THROUGH ANY OF THE UNDERGROUND CONDUIT RUNS. THE CONTRACTOR SHALL START PULLING WIRE ONLY AFTER THE AUTHORIZED REPRESENTATIVE INSPECTS AND FIND THAT THE WIRE CONTAINS NO SPLICES, THE NEUTRAL WIRE IS WHITE AND THE EQUIPMENT GROUND WIRE IS GREEN.

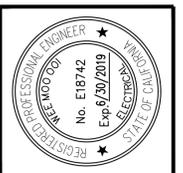


**THE CITY OF LOS ANGELES
DEPARTMENT OF RECREATION AND PARKS**

ASSISTANT GENERAL MANAGER: RAMON BARRAJAS

GENERAL MANAGER: MIKE SHULL

PROJECT LANDSCAPE ARCHITECT: _____
PROJECT ENGINEER: David Ooi
DATE: _____
AS BUILTS DRAWN BY: _____



**PROJECT NAME:
PROP K SPORTS LIGHTING
RETROFIT: HIGHLAND PK RC**

**ADDRESS:
6150 PIEDMONT AVENUE
LOS ANGELES, CA 90042**

REVISIONS:	DATE:
△	
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**PLAN NAME:
ELECTRICAL SPECS
& NOTES**

DRAWN BY: DO	APPROVED BY:
SCALE:	ISSUE DATE: 1/28/2018
W.O. NO.	FILE NO.

**DRAWING NO.
E1.0**

SHEET 1 of 4 SHEETS

DEPARTMENT OF RECREATION AND PARKS
CITY OF LOS ANGELES

PROP K SPORTS LIGHTING IMPROVEMENT: HIGHLAND PARK RC



PARKPROUD.LA

ELECTRICAL SPECIFICATIONS (CONT.)

16. TAGGING:

REQUIRED: ON BOTH HOT AND NEUTRAL WIRES OF ALL CIRCUIT IN SWITCHBOARD AND PANELBOARDS, AT PULL, JUNCTION AND OUTLET BOXES AT EACH DEVICE OR LIGHTING FIXTURE. TAGGING SHALL PROVIDE POSITIVE AND PERMANENT IDENTIFICATION AND SHALL BE SCOTCH NUMERAL TAPE BY THE MINNESOTA MINING AND MANUFACTURING CO.

17. EQUIPMENT AND ELECTRICAL CONNECTIONS:

(A.) SEE DIVISION 1 SECTION 38 FOR MATERIAL TESTING.

(B.) PROVIDE ALL INSTRUMENTS, EQUIPMENT AND LABOR REQUIRED FOR THE SPECIFIED TESTS. CONDUCT ALL TESTS IN THE PRESENCE OF THE GEN. MANAGER OR AUTHORIZED REPRESENTATIVE. CONDUCT THE TEST AT SUCH TIME AS THE GEN. MANAGER MAY DIRECT OR AS SPECIFIED. TESTS FAILING TO CONFORM TO THE REQUIREMENTS OF THE DRAWING AND SPECIFICATIONS, AND ANY PIECE OF EQUIPMENT THAT FAILS THE TEST DESCRIBED HEREIN WILL BE REJECTED AND SUITABLE EQUIPMENT SHALL BE PROVIDED AND INSTALLED. TABULATE AND FORWARD TO THE PROJECT MANAGER IN TRIPLICATE ALL THE PERTINENT TEST DATA. INCLUDE THE DATE OF THE TEST, IDENTIFICATION OF ALL ITEMS TESTED, READINGS FOR EACH TEST, COMMENTS WHERE REQUIRED AND THE SIGNATURES OF THE INDIVIDUAL CONDUCTING THE TEST AND OF THE GEN. MANAGER'S REPRESENTATIVE OBSERVING THE TEST. FORWARD ALL THE TEST DATA TO THE PROJECT MANAGER WITHIN 10 DAYS OF THE TEST PERFORMANCE BUT IN NO CASE LATER THAN 5 DAYS BEFORE THE SCHEDULED FINAL INSPECTION.

(C.) THE FOLLOWING TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE DEPT. INSPECTOR OR REPRESENTATIVE. TABULATE TEST RESULTS FOR THE DEPT. OF RECREATION AND PARKS RECORDS.

1. CONDUCTORS 600-VOLT CLASS: AFTER WIRING IS COMPLETED AND CONNECTED FOR OPERATION, BUT PRIOR TO PLACING SYSTEMS IN SERVICE AND BEFORE ANY BRANCH CIRCUIT BREAKERS ARE CLOSED, PERFORM INSULATION RESISTANCE TESTS IN ALL CIRCUITS. MEASURE THE INSULATION RESISTANCE BETWEEN EACH CONDUCTORS AND GROUND. TAKE READINGS AFTER THE VOLTAGE HAS BEEN APPLIED FOR A MINIMUM OF ONE MINUTE. THE MINIMUM INSULATION RESISTANCE BASED ON THE ALLOWABLE AMPACITY OF THE CONDUCTOR AS FIXED BY NFPA 70 SHALL BE AS FOLLOWS:

AMPERES	OHMS
25 THROUGH 50	250,000
51 THROUGH 100	100,000
101 THROUGH 200	50,000
201 THROUGH 400	25,000

2. HIGH VOLTAGE CONDUCTORS (ABOVE 600 VOLTS): AFTER INSTALLATION AND BEFORE SPLICING AND TERMINATING, PERFORM A FIELD ACCEPTANCE TEST ON CABLES PRIOR TO TESTING. THE CABLES SHALL NOT BE CONNECTED TO ANY EQUIPMENT. THE TEST PROCEDURE SHALL BE IN ACCORDANCE WITH AEC AND NEMA. FIELD ACCEPTANCE TEST SHALL BE 15 KV FOR DC FOR 15 MINUTES. IF CABLE FAILS TO PASS INITIAL TEST, PERFORM SUBSEQUENT ACCEPTANCE TESTS UNTIL THE WORK IS IN COMPLIANCE WITH THE CONTRACT REQUIREMENTS.

3. GROUND RODS: GROUND RESISTANCE TEST SHALL BE PERFORMED IN NORMALLY DRY WEATHER NOT LESS THAN 48 HOURS AFTER RAINFALL. GROUND RESISTANCE SHALL BE MEASURED FOR EACH PIECE OF EQUIPMENT TO THE GROUND ELECTRODE. USE A PORTABLE GROUND TESTING MEGGER TO TEST EACH GROUND OR GROUP OF GROUNDS. THE EQUIPMENT SHALL BE EQUIPPED WITH A METER READING DIRECTLY IN OHMS OR FRACTIONS THEREOF TO INDICATE THE GROUND VALUE OF THE GROUND ELECTRODE UNDER TEST. PROVIDE ONE COPY OF THE GROUND MEGGER'S DIRECTIONS, INDICATING THE METHOD TO BE USED.

18. LIGHTING FIXTURES:

(A.) TYPES:

1. AS INDICATED HEREINAFTER AND IN THE LIGHTING FIXTURE LIST, ALL FIXTURES MUST BE UL LISTED AND SUPPORTING MEMBERS SUCH AS RODS AND PIPES MUST BE APPROVED BY THE CITY OF LOS ANGELES ELECTRICAL TESTING LABORATORY.

2. ALL FIXTURES USED AS RACEWAYS SHALL CONFORM TO THE CODE REQUIREMENTS FOR MAXIMUM NUMBER OF CONDUCTORS PERMITTED. BOX TEMPERATURES SHALL NOT EXCEED 75°C ADJACENT TO THHN/THWN WIRE.

3. ALL FIXTURES SHALL BE UL LISTED FOR THE PURPOSE, WET LOCATION FOR OUTDOOR INSTALLATION, AND DAMP LOCATION FOR SHOWERS AND CANOPIES.

(B.) FITTINGS AND ACCESSORIES: AS NECESSARY FOR PROPER INSTALLATION AND OPERATION.

(C.) DEVIATION SHALL BE SUBMITTED TO THE DEPARTMENT FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION.

(D.) SPORTS LIGHTING FIXTURES: SUBMIT AN AIMING DIAGRAM FROM FIXTURE MANUFACTURER TO THE DEPARTMENT FOR APPROVAL PRIOR TO INSTALLATION. CONTRACTOR SHALL ENSURE THAT FIXTURES ARE INSTALLED IN ACCORDANCE TO APPROVED AIMING DIAGRAM.

19. RECORD DRAWINGS:

(A.) IMMEDIATELY AFTER WORK IS INSTALLED, CAREFULLY DRAW ON PRINTS IN RED INK ALL WORK WHICH IS INSTALLED AT VARIANCE WITH THE WORK AS INDICATED ON THE DRAWINGS. INDICATE BY MEASURED DIMENSION TO BUILDING CORNERS OR OTHER PERMANENT MONUMENTS THE EXACT LOCATION OF ALL CHANGES.

(B.) ACCURATE LOCATIONS OF ALL POLES, CONDUIT RUNS, WIRING, NAMES AND MODEL NUMBERS OF ACCEPTED SUBSTITUTE EQUIPMENT, ELECTRICAL OUTLETS AND OTHER EQUIPMENT AS INSTALLED SHALL BE PROVIDED IN STRICT ACCORDANCE WITH THESE SPECIFICATIONS.

20. OPERATING MANUALS AND INSTRUCTIONS:

(A.) THE CONTRACTOR SHALL FURNISH TO THE CITY FOUR BOUND COPIES OF OPERATING AND MAINTENANCE MANUAL FOR ALL ELECTRICAL EQUIPMENT.

(B.) THE CONTRACTOR SHALL EXPLAIN IN DETAIL ALL MANUALS FOR THE OPERATION AND MAINTENANCE OF ALL EQUIPMENT TO THE RECREATION AND PARKS MAINTENANCE PERSONNEL BEFORE COMPLETION AND ACCEPTANCE OF THE PROJECT.

20. RECORD DRAWINGS:

(A.) IMMEDIATELY AFTER WORK IS INSTALLED, CAREFULLY DRAW ON PRINTS IN RED INK ALL WORK WHICH IS INSTALLED AT VARIANCE WITH THE WORK AS INDICATED ON THE DRAWINGS. INDICATE BY MEASURED DIMENSION TO BUILDING CORNERS OR OTHER PERMANENT MONUMENTS THE EXACT LOCATION OF ALL CHANGES.

(B.) ACCURATE LOCATIONS OF ALL POLES, CONDUIT RUNS, WIRING, NAMES AND MODEL NUMBERS OF ACCEPTED SUBSTITUTE EQUIPMENT, ELECTRICAL OUTLETS AND OTHER EQUIPMENT AS INSTALLED SHALL BE PROVIDED IN STRICT ACCORDANCE WITH THESE SPECIFICATIONS.

21. OPERATING MANUALS AND INSTRUCTIONS:

(A.) THE CONTRACTOR SHALL FURNISH TO THE CITY FOUR BOUND COPIES OF OPERATING AND MAINTENANCE MANUAL FOR ALL ELECTRICAL EQUIPMENT.

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ELECTRICAL GENERAL NOTES

1. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO SUBMISSION OF BID TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND EXTENT OF THEIR WORK. SUBMISSION OF A PROPOSAL OR BID ACKNOWLEDGES FULL RESPONSIBILITY FOR FURNISHING A COMPLETE AND PROPERLY FUNCTIONING SYSTEM.
2. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS THAT A COMPLETE AND WORKABLE ELECTRICAL INSTALLATION BE PROVIDED FOR ALL EQUIPMENT DESCRIBED. ANY INCONSISTENCY SHALL BE BROUGHT TO THE PROJECT MANAGER'S ATTENTION FOR CLARIFICATION. CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR, COORDINATE ALL WORK WITH OTHER TRADES AND COMPLY WITH ALL APPLICABLE CODES.
3. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS PRIOR TO JOB START AND OBTAIN FINAL INSPECTION APPROVAL FROM THE DEPARTMENT OF BUILDING AND SAFETY PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.
4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL ELECTRICAL EQUIPMENT AND MATERIALS TO THE DEPARTMENT FOR APPROVAL PRIOR TO ORDERING AND SHALL BE RESPONSIBLE FOR ANY DELAYS INCURRED DUE TO REJECTED ITEMS.
5. ANY DAMAGES DONE IN THE COURSE OF CONSTRUCTION SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE SATISFACTORY TO THE PROJECT MANAGER.
6. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY AND MAYBE VARIED IN THE FIELD. MINIMUM CONDUIT SIZE SHALL BE 3/4-INCH UNLESS NOTED ON THE PLAN. EXPOSED CONDUIT SHALL BE PAINTED TO MATCH THE ADJACENT FINISH.
7. CONTRACTOR SHALL FURNISH TO THE DEPARTMENT A VANDAL PROOF SCREW DRIVER FOR EACH TYPE OF VANDAL PROOF SCREWS USED IN THE PROJECT.
8. PVC INSTALLED UNDERGROUND SHALL BE 24-INCHES DEEP AND COVERED WITH AT LEAST 3-INCH 100-E-100 CONCRETE MIX.



VICINITY MAP
SCALE: NONE

THE CITY OF LOS ANGELES
DEPARTMENT OF RECREATION AND PARKS

ASSISTANT GENERAL MANAGER: RAMON BARRAJAS

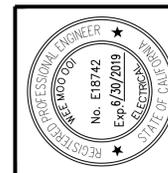
GENERAL MANAGER: MIKE SHULL

PROJECT LANDSCAPE ARCHITECT: David Doi

PROJECT ENGINEER: _____

AS BUILTS DRAWN BY: _____

DATE: _____



PROJECT NAME:
**PROP K SPORTS LIGHTING
RETROFIT: HIGHLAND PK RC**

ADDRESS:
**6150 PIEDMONT AVENUE
LOS ANGELES, CA 90042**

REVISIONS:	DATE:
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PLAN NAME:
ELECTRICAL SPECS
& NOTES

DRAWN BY: DO

APPROVED BY: _____

SCALE: _____

ISSUE DATE: 1/28/2018

W.O. NO. _____

FILE NO. _____

DRAWING NO.
E2.0

SHEET 2 OF 4 SHEETS

FIXTURE SCHEDULE										
Tag	Qty	Catalog Number	Description	Lamp	IES File	Lumens	LLF	Watts	Volts	Currents
A	8	VUE-3-T4-20RL-1050-5500-1050-W SPORTS LIGHT SHIELD	LED shall be controlled by photocell, motion sensor and time clock. 1,2	LED	VUE-3-T4-20RL-1050-W SPORTS LIGHT SHIELD	69793	1.0	671	120-277V	1050 mA

- LED switch "ON/OFF" automatically by motion sensor. LED switch "ON" when the court is occupied. LED stay "ON" for 30 minutes and switch "OFF" if no motion is detected. Cycle repeats. LED turn "OFF" by time clock after 10:30PM.
- LED shall be factory equipped with controller for wireless remote motoring and scheduling.

POLE NUMBER (EXISTING POLE U.N.O.)	QTY REMOVED (1100W - LAMP + BALLAST)	QTY REMOVED (470W - LAMP + BALLAST)	QTY REMOVED (1650W - LAMP + BALLAST)	EXIST. NOMINAL LOAD (W)	INSTALL 409W LED	INSTALL 584W LED	INSTALL 671W LED	NEW NOMINAL LOAD (W)
P1	1			1100			2	1342
P2	1			1100			2	1342
P3	1			1100			2	1342
P4	1			1100			2	1342
TOTAL	4			4.4 kW			8	5.4 kW

EQUIPMENT REMOVAL & INSTALLATION SCHEDULE

ILLUMINANCE LEVEL STANDARDS

- L70 RATING OF MINIMUM 90,000 HOURS OF OPERATION
- MINIMUM OF 50 FC AVERAGE IN ACCORDANCE WITH LA REC & PARKS STANDARD LIGHT LEVELS AND UNIFORM LIGHTING WITH A MAX/MIN RATIO OF 2:1 OR BETTER FOR INFIELD (U.O.N.).
- MINIMUM OF 30 FC AVERAGE IN ACCORDANCE WITH LA REC & PARKS STANDARD LIGHT LEVELS AND UNIFORM LIGHTING WITH A MAX/MIN RATIO OF 2.5:1 OR BETTER FOR OUTFIELD (U.O.N.).
- COLOR TEMPERATURE OF 5500 DEG.K +-200K.
- MINIMUM OF 30 FC AVERAGE IN ACCORDANCE WITH LA REC & PARKS STANDARD LIGHT LEVELS AND UNIFORM LIGHTING WITH A MAX/MIN RATIO OF 3:1 OR BETTER FOR BASKETBALL (U.O.N.).

POWER NOTES

- THE CONTRACTOR SHALL EXAMINE THE CONDITION OF THE EXISTING ELECTRICAL INSTALLATION SUCH AS POWER CONNECTIONS, WIRING, JUNCTION BOXES, LIGHTING EQUIPMENT AND FOUNDATION AND REPORT ANY PROBLEMS TO THE PROJECT MANAGER PRIOR TO SUBMISSION OF BID.

SYMBOL LEGEND

- ⊙ PROPOSED LED
- ⊕ EXISTING POLE
- P# POLE NUMBER

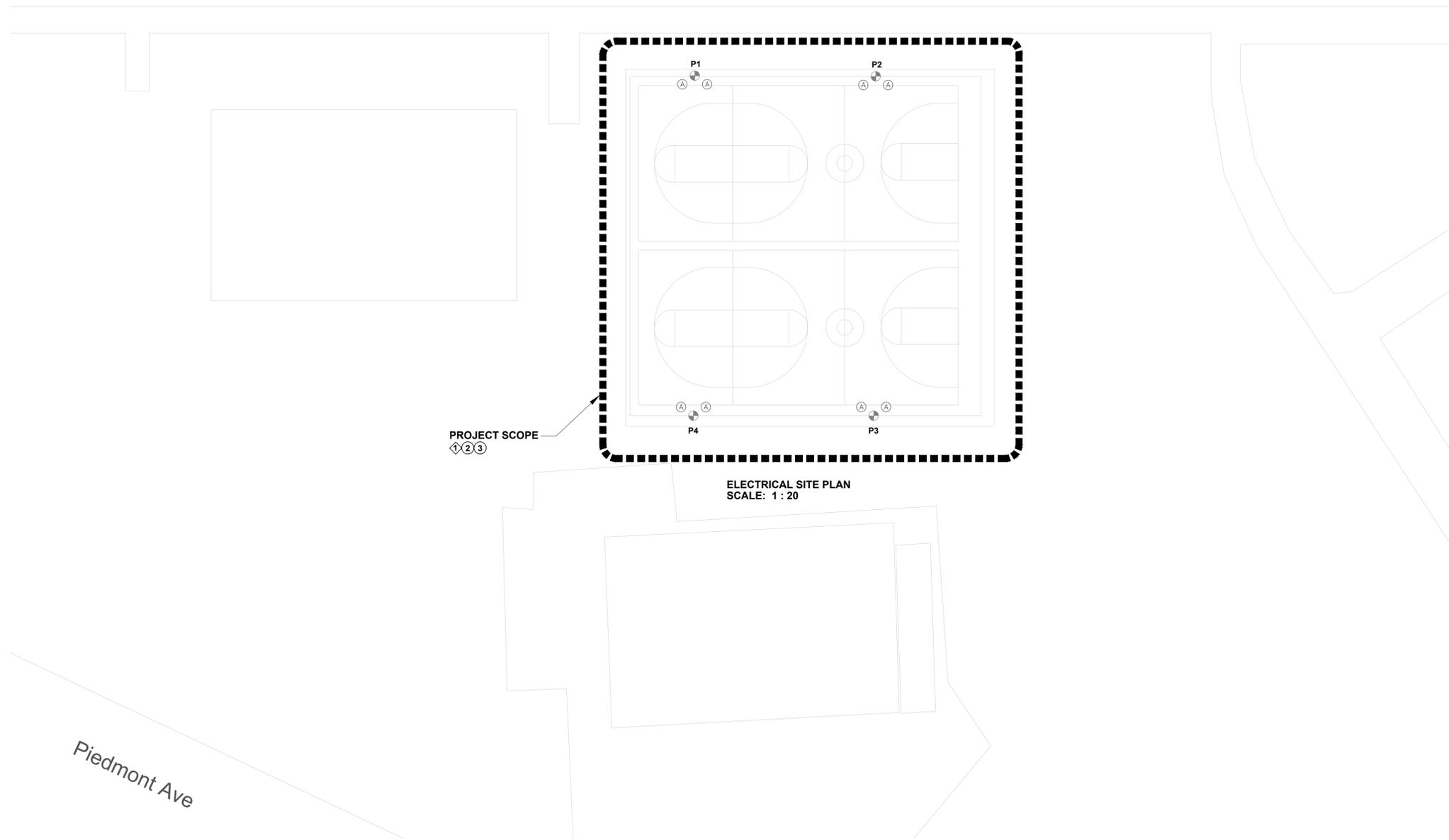
SHEET NOTES

- THE CONTRACTOR SHALL EXAMINE THE CONDITION OF THE EXISTING POWER CONNECTIONS, WIRING, AND JUNCTION BOXES AND REPORT ANY PROBLEMS TO THE PROJECT MANAGER.
- THE CONTRACTOR SHALL DISCONNECT, REMOVE AND DISPOSE OF EXISTING FIXTURES IN ACCORDANCE WITH ACCEPTABLE PRACTICES AND REGULATIONS REGARDING SAME. PROVIDE COPIES TO DEPT. OF REC AND PARKS, OF ANY MANIFESTS REQUIRED DURING THE DISPOSAL OF ANY ENVIRONMENTALLY CONTROLLED SUBSTANCES.
- THE CONTRACTOR SHALL PROVIDE THREE (3) ELECTRONIC COPIES OF ALL ALL FINAL DOCUMENTS INCLUDING OWNER'S MANUALS, SHOP DRAWINGS, WARRANTIES, INSPECTION REPORTS/CERTIFICATES, AND AS-BUILT DRAWINGS ON CD, DVD, OR FLASH MEMORY.
- THE CONTRACTOR SHALL PROVIDE PHOTOMETRIC CALCULATIONS AND CUT SHEETS OF THE PROPOSED LED LIGHT FIXTURE FOR REVIEW AND APPROVAL.
- THE CONTRACTOR SHALL OBTAIN RIGHT-OF-ENTRY PERMIT FROM LA REC & PARKS AND COORDINATE WITH THE FACILITY DIRECTOR PRIOR TO ANY REMOVAL AND INSTALLATION WORK.
- THE CONTRACTOR SHALL PROVIDE LIGHT METER READINGS IN THE AREAS SPECIFIED BY LA REC & PARKS VERIFYING THAT THE LIGHTING RETROFIT INSTALLATION PROVIDES THE LIGHTING LEVELS ON THE APPROVED PHOTOMETRIC CALCULATIONS AND ON THE FINAL DRAWINGS THAT WERE PROVIDED TO LA REC & PARKS.
- THE CONTRACTOR SHALL PROVIDE A PDF OR AN IMAGE COPY OF UPDATED PANEL SCHEDULE AND DIRECTORY ALONG WITH OTHER FINAL DOCUMENTS SUBMITTING TO LA REC & PARKS UPON COMPLETION OF THE PROJECT.

KEY NOTES

- INSTALL NEW POLE AND FOUNDATION PER MANUFACTURER'S RECOMMENDATION.
- REMOVE EXISTING HID FIXTURES AND INSTALL LED PER REMOVAL AND INSTALLATION SCHEDULE.
- EXISTING POLES TO REMAIN AND PROTECTED.

N Figueroa St



PROJECT SCOPE
①②③

ELECTRICAL SITE PLAN
SCALE: 1 : 20

Piedmont Ave



THE CITY OF LOS ANGELES
DEPARTMENT OF RECREATION AND PARKS
GENERAL MANAGER: MICHAEL A. SHULL
ASSISTANT MANAGER: RAMON BARAJAS
PROJECT LANDSCAPE ARCHITECT: David Ooi
PROJECT ENGINEER: David Ooi
AS-BUILTS DRAWN BY: _____ DATE: _____



PROJECT NAME:
**PROP K SPORTS LIGHTING
RETROFIT: HIGHLAND PK RC**
ADDRESS:
**6150 PIEDMONT AVENUE
LOS ANGELES, CA 90042**

REVISIONS:	DATE:
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PLAN NAME:	
ELECTRICAL SITE PLAN	
DRAWN BY: DO	APPROVED BY: ----
SCALE:	ISSUE DATE: 1/28/2018
W.O. NO. ---	FILE NO. ---
DRAWING NO. E3.0	
SHEET 3 OF 4 SHEETS	



PARK PROUDA

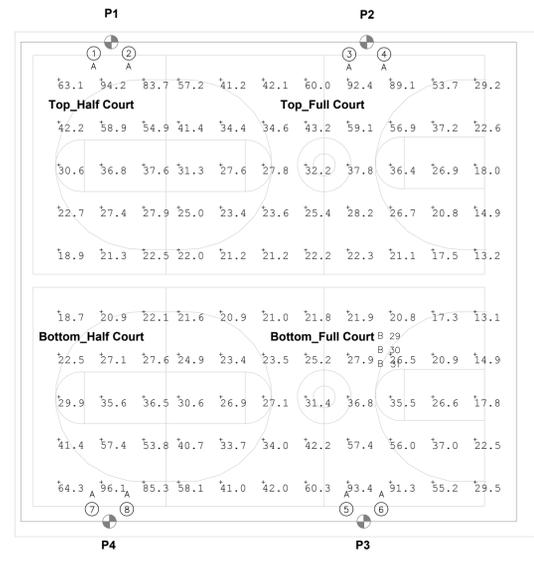
SHEET NOTES

- THIS LAYOUT IS BASED ON .IES FILES THAT WERE LAB TESTED OR COMPUTER GENERATED. ACTUAL RESULT MAY VARY.
- MOUNTING HEIGHTS INDICATES HEIGHT OF HEAD FROM GROUND.
- POLE ELEVATION BASED ON 29FT POLES PLUS 18IN AFG BASES FOR BASKETBALL & TENNIS.
- POLE ELEVATION BASED ON 40FT - 75FT POLES PLUS 18IN AFG BASES FOR BASEBALL.
- CALCULATION AT GRADE.

SYMBOL LEGEND

- ⊙ LUMINAIRE NUMBER
- ⊕ EXISTING POLE
- ⊖ NEW POLE
- P# POLE NUMBER
- A B LUMINAIRE TAG NUMBER

THE CITY OF LOS ANGELES
 DEPARTMENT OF RECREATION AND PARKS
 GENERAL MANAGER: MICHAEL A. SHULL
 ASSISTANT MANAGER: RAMON BARAJAS
 PROJECT LANDSCAPE ARCHITECT: _____
 PROJECT ENGINEER: David Loi
 LIC. NO. _____ E. 18742
 LIC. NO. _____
 DATE: _____
 AS-BUILTS DRAWN BY: _____



PHOTOMETRIC SITE PLAN: TENNIS COURT
 SCALE: 1 : 20

Luminaire Tag Summary

Tag	Qty
A	8

Luminaire Location Summary

LumNo	PoleNo	HW	Orient	Flt
1	P1	30	270	20
2	P1	30	270	20
3	P2	30	270	20
4	P2	30	270	20
5	P3	30	90	20
6	P3	30	90	20
7	P4	30	90	20
8	P4	30	90	20

Calculation Summary

Zone	Avg (FC)	Min (FC)	Avg/Min	Max/Min
Bottom Full Court	34.3	13.1	2.6	7.1
Bottom Half Court	42.6	18.7	2.3	5.1
Top Full Court	34.5	13.2	2.6	7.0
Top Half Court	42.9	18.9	2.3	5.0

Luminaire Schedule

PoleNo	Description	Lum. Watts	Total Watts	Tag	Qty
P1	VUB-3-T4-208L-1050-W SPORTS LIGHT SHIELD	671	1342	A	2
P2	VUB-3-T4-208L-1050-W SPORTS LIGHT SHIELD	671	1342	A	2
P3	VUB-3-T4-208L-1050-W SPORTS LIGHT SHIELD	671	1342	A	2
P4	VUB-3-T4-208L-1050-W SPORTS LIGHT SHIELD	671	1342	A	2

NOTICE TO CONTRACTOR
 THE LUMINAIRES SPECIFIED ON THIS PLAN SHALL BE FACTORY EQUIPPED WITH SHIELDS/VISORS WHEN TILT BEYOND 5 DEGREES.

NOTICE TO CONTRACTOR
 THE LUMINAIRES SPECIFIED ON THIS PLAN SHALL BE FACTORY-AIMED-ORIENTED ON NEW CROSS ARM. THE CONTRACTOR SHALL VALIDATE AIMING AND ORIENTATION WITH THE MANUFACTURE PRIOR TO INSTALLATION.

PROJECT NAME:
**PROP K SPORTS LIGHTING
 RETROFIT: RESEDA RC**
 ADDRESS:
**18411 VICTORRY BLVD.
 RESEDA, CA 91335**

REVISIONS:	DATE:
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PLAN NAME:
 PHOTOMETRIC SITE PLAN

DRAWN BY: DO	APPROVED BY: ----
SCALE: ---	ISSUE DATE: 1/28/2018
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DRAWING NO.
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 SHEET 4 OF 4 SHEETS