

BOARD OF RECREATION
AND PARK COMMISSIONERS

BOARD REPORT

NO. 20-062

DATE May 07, 2020

C.D. 14

BOARD OF RECREATION AND PARK COMMISSIONERS

SUBJECT: YOSEMITE RECREATION CENTER SPORTS FIELD LIGHTING (PRJ21137) (W.O. #E170514) PROJECT (AKA PROP K SPORTS FIELD LIGHTING RETROFIT: YOSEMITE RC) – APPROVAL OF FINAL PLANS – CATEGORICAL EXEMPTION FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) PURSUANT TO ARTICLE III, SECTION 1, CLASS 1(1) [EXTERIOR ALTERATIONS WHERE THERE BE NEGLIGIBLE EXPANSION OF USE], 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 DP
N. Williams _____



General Manager

Approved X Disapproved _____ Withdrawn _____

RECOMMENDATIONS

1. Approve the final plans, substantially in the form on file in the Board of Recreation and Park Commissioners (Board) Office and as attached to this Report, for the proposed Yosemite Recreation Center Sports Field Lighting (PRJ21137) (W.O. #E170514) Project (AKA Prop K Sports Field Lighting Retrofit: Yosemite RC) (Project);
2. Find that the proposed Project is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Article III, Section 1, Class 1(1) [Exterior alterations where there be negligible expansion of use], 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, and direct Department of Recreation and Parks (RAP) staff to file a Notice of Exemption (NOE) with the City and Los Angeles County Clerk's Office;
3. Authorize the Chief Accounting Employee or designee to prepare a check to the Los Angeles County Clerk, in the amount of \$75.00, for the purpose of filing the NOE; and,
4. Authorize RAP's Chief Accounting Employee or designee to make technical corrections as necessary to carry out the intent of this Report.

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SUMMARY

Yosemite Recreation Center is located at 1840 Yosemite Drive, in Council District 14. This property includes a picnic area, basketball courts, children's play area, baseball diamonds, pool and a gymnasium. Approximately 4,100 City residents live within a one-half mile walking distance of the recreation center.

The proposed Project is a Proposition K – L.A. for Kids Program Competitive grant (9th Cycle) (Prop K) funded project. The scope of work consists of replacing existing lighting at two (2) baseball diamonds with the new, 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 Bureau of Engineering (BOE) staff, it was determined that the work can be completed by RAP pre-qualified contractors and for BOE to provide construction management services.

A geotechnical investigation was conducted to determine the feasibility of this proposed Project, and the findings are documented in Attachment No. 2. As stated in the geotechnical report, it was determined that the proposed Project is feasible from a geotechnical standpoint.

RAP's Planning, Construction and Maintenance Branch prepared the plans and specifications, and obtained all the necessary approvals for the proposed Project. As required by Prop K, three (3) Local Volunteer Neighborhood Oversight Committee (LVNOC) meetings were conducted. The first LVNOC meeting was on February 21, 2017. The second LVNOC meeting was on April 5, 2017. The third LVNOC meeting was on September 5, 2017. The community, the LVNOC and Office of Council District 14 are in full support of the proposed Project.

Funding for the proposed Project is available from the following funds and accounts:

<u>FUNDING SOURCE</u>	<u>FUND/DEPT./ACCT. NO.</u>
Proposition K	43K/10/10NPFL
Site and Facilities	209/88/88SMGI

TREES AND SHADE

Since this proposed Project focuses on improving lighting for evening recreation activities, no trees will be removed and any existing trees near the proposed location(s) of new lighting will be protected during construction. Additional trees and shade structures are not part of the proposed scope of work for this Project.

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ENVIRONMENTAL IMPACT

The proposed Project consists of the removal and replacement of light fixtures and controls for the existing baseball diamonds to meet the current standard of public safety. As such, RAP staff recommends that the Board determines that it is exempt from the provisions of CEQA pursuant to Article III, Section 1, Class 1(1), Class 1(4) and Class 1(12) of the City CEQA Guidelines and Article 19, Section 15304(d) of California CEQA Guidelines. An NOE will be filed with the Los Angeles County Clerk upon approval by the Board.

FISCAL IMPACT

There is no immediate fiscal impact to RAP's General Fund as it will be funded by Prop K funds and Site and Facilities funds. The proposed Project should reduce long term maintenance and operational costs, as it will replace existing, higher energy use sports court lighting systems with new, 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 the proposed LED lighting systems will decrease energy consumption resulting in a more sustainable park system.

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, RAP.

LIST OF ATTACHMENT(S)

- 1) Final Plans for Prop K Sports Lighting Retrofit (AKA Yosemite Recreation Center Sports Field Lighting Project.)
- 2) Geotechnical Report for Yosemite Recreation Center Sports Field Lighting Project.

PROP K SPORTS LIGHTING IMPROVEMENT: YOSEMITE 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 TO INCLUDE 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, SOILED DURING CONSTRUCTION, 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 OR 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 TO BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE DEPARTMENT OF WATER AND POWER. CONDUITS SHALL HAVE A MINIMUM 3" CONCRETE COVER.

(B) COORDINATE ALL LADWP WORK AS FOLLOWS:

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

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 LA RECREATION AND PARKS.

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, GE, EATON 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 GE, EATON 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, EQUIVALENT GE, EATON OR EQUAL, UNLESS NOTED OTHERWISE ON THE PLAN.

(E) IDENTIFICATION:

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

(F) 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.

(G) MOUNTING INDOOR TYPE:

SECURELY BOLTED TO FLOOR AND WALL AND PLUMB AND SQUARE. PROVIDE 3" RAISED CONCRETE SLAB FOR MOUNTING SWITCHGEAR LOCATED ON THE GROUND FLOOR. DIMENSION OF RAISED CONCRETE SLAB TO BE THE SAME AS THE SWITCHGEAR. VERIFY SITE SPECIFICATION INSTALLATION WITH RAP ENGINEERS/PROJECT MANAGER.

(H) MOUNTING OUTDOOR TYPE:

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

(I) SHOP DRAWINGS:

BEFORE ANY FABRICATION OF SWITCHGEAR IS BEGUN, SHOP DRAWINGS LISTING 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.

(J) 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 JUMPS 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, GE, EATON OR EQUAL.

(B) IDENTIFICATION SHALL HAVE ENGRAVED LAMINATED PLASTIC NAMEPLATES. SCHEDULES SHALL BE TYPEWRITTEN 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. OR MYERS POWER PRODUCTS, IEM 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 6 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 12" O.C. WITH 3 INCH CLEAR COVER TO SUBGRADE, AND SECURELY TIED AT EACH POINT OF CONTACT.

SWITCHGEAR INSTALLATION ON EXISTING SLABS: SECURELY BOLTED TO A STEEL REINFORCED CONCRETE PAD EXTENDING 6" BEYOND THE PANEL ENCLOSURE IN BOTH REAR & SIDES AND 0" IN FRONT OF ENCLOSURE. PAD SHALL EXTEND 3" ABOVE & 6" BELOW FINISH GRADE. REINFORCING STEEL SAME AS ABOVE.

(D) LIGHTS AND RECEPTACLES: PROVIDE AND INSTALL A SURFACE MOUNTED LED 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 1/2" 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 AN ET90215CR INTERMATIC. 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.

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 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 REES 04960-415 MUSHROOM PLUNGER 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 ESCUTCHED 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 H2D RATED WITH GALVANIZED FRAME OR EQUAL, OR AS INDICATED ON THE PLAN. PULL BOXES TO BE SEIZED PER NEC.

(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 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 LESS THAN 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 THERE FILLED WITH GROUT COMPOSED OF ONE PART LOW ALKALI PORTLAND CEMENT TO TWO PARTS WASHED SAND, BEVELED AND TROVELED 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 PVC SCHED 80 TO 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 SCHED 80 CONDUIT STUBS LOCATED 3 FEET OUTSIDE FOOTING LINES.

2. EMT MAYBE USED ABOVE GROUND INSIDE BUILDINGS 10'AFF 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 COATING OF PVC CONFORMING TO ANSI C-80 & NEMA RN1.

(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, APPLETON OR EQUAL MALLEABLE IRON INSULATED GROUNDING BUSHINGS, UL FILE E14814A.

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 6" DETECTABLE "CAUTION" TAPE, 12" ABOVE CONDUIT, 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.

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 COMPOUND).

(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 OR CONCRETE SLABS 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". PULL IN PVC SCHED 40 THROUGH BORING HOLE.

1. CONDUITS IN UNDERGROUND PULL BOXES SHALL BE SEALED WITH "LHD"-#H 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. NO CONDUCTORS SMALLER THAN NO. 12 AWG EXCEPT FOR CONTROL WIRES WHICH SHALL BE NO. 14 AWG OR AS INDICATED ON THE PLAN.

3. 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.

4. 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 OR USE POLARIS, DRYCON CONNECTOR OR EQUIVALENT.

(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), NEUTRAL (WHITE) FOR 208/120V, 3 PHASE; PHASE A (BLACK), HIGH-LEG (ORANGE), PHASE C (BLUE), NEUTRAL (WHITE) FOR 240/120V 3 PHASE; PHASE A (BROWN), PHASE B (ORANGE), PHASE C (YELLOW), NEUTRAL (WHITE) FOR 480/277V, 3 PHASE.

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 BARAJAS

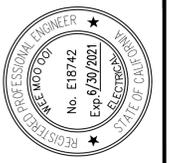
GENERAL MANAGER: MIKE SHULL

PROJECT LANDSCAPE ARCHITECT: David Ooi

PROJECT ENGINEER: David Ooi

AS-BUILTS DRAWN BY: _____

DATE: _____



PROJECT NAME:
PROP K SPORTS LIGHTING IMPROV: YOSEMITE RC

ADDRESS:
**1840 YOSEMITE DRIVE
LOS ANGELES, CA 90041**

REVISIONS:	DATE:
△	
△	
△	
△	
△	
△	

PLAN NAME:
ELECTRICAL SPECS & NOTES

DRAWN BY: DO

APPROVED BY: _____

SCALE: _____

ISSUE DATE: 7/17/2019

W.O. NO. _____

FILE NO. _____

DRAWING NO.
E1.0

SHEET 1 of 7 SHEETS

CITY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
Bureau of Engineering
GEOTECHNICAL ENGINEERING DIVISION

October 12, 2017

YOSEMITE RECREATION CENTER – SPORTSFIELD LED LIGHTING
1840 YOSEMITE DRIVE
W.O. E170514D

GED FILE NO. 16-103

1.0 INTRODUCTION

The Los Angeles Department of Public Works, Bureau of Engineering, Geotechnical Engineering Division (GED) has prepared this report to provide design and construction recommendations for the project. The project site, as shown on Figure 1 – Vicinity Map, is located near the southeast intersection Yosemite Drive and La Roda Avenue in the Eagle Rock area of Los Angeles. The project site is within the existing Yosemite Recreation Center at 1840 Yosemite Drive.

2.0 PROJECT DESCRIPTION

The project site is presented on Figure 2 – Site Location Map. The project includes installing a new light-emitting diode (LED) light pole to illuminate the existing western baseball field. The LED light pole will be installed in the northwest corner of the baseball field (see Figure 2). The project also includes replacing the light fixtures on eight of the existing baseball field lights with LEDs. The existing baseball field lights are located around the perimeter of the field (see Figure 2). If the fixtures on the existing baseball field light poles cannot easily be replaced, the existing poles will likely be demolished, and new LED light poles will be installed. We understand the proposed LED light poles will be approximately 60 feet high.

3.0 GEOTECHNICAL INVESTIGATION

Our geotechnical investigation consisted of field exploration and laboratory testing. The field exploration and laboratory testing was completed by the City of Los Angeles, Department of General Services, Standards Division (Standards). A copy of Standards' data report is included in Appendix A of this report. The findings and recommendations in this report are based on the information presented in Standards' report. The GED has reviewed their report, concurs with the information contained in it, and accepts responsibility for the use of its contents.

3.1 SUBSURFACE CONDITIONS

Standards drilled two hollow-stem auger (HSA) borings, each to a depth of approximately 21½ feet below ground surface (bgs). The boring locations are presented on the Test Boring Location Map and Aerial Photo in Standard's data report (Appendix A).

Uncertified fill was not encountered in either of the borings. The native soil encountered in B-1 consists of silty sand to the maximum explored depth of approximately 21½ feet bgs. The upper native soil in B-2 consists of poorly graded sand with silt and trace gravel to a depth of approximately 7½ feet. The underlying soil consists of silty to clayey sand to the maximum explored depth of approximately 21½ feet bgs. The field Standard Penetration Test blow counts indicate that the native soil found is generally loose to medium dense.

Groundwater was not encountered in either boring to the maximum explored depth of 21½ feet bgs. Groundwater levels are expected to fluctuate with seasonal rainfalls, dry weather (i.e. drought conditions), and pumping activities in the vicinity of the site. Nevertheless, groundwater is not expected to affect construction of the proposed light pole foundations.

3.2 LABORATORY TEST RESULTS

The laboratory testing program consisted of grain size distribution, hydrometer, and Atterberg Limits. The results of the Atterberg Limits tests indicate the plasticity index of the clayey soil found in B-2 ranges from 5 to 11. The soil in B-1 was found to be non-plastic. Based on these results, there is a low potential for shrink-swell behavior.

4.0 RECOMMENDATIONS

Based on the results of the geotechnical investigation, the proposed project is considered feasible from a geotechnical standpoint provided the recommendations presented in this report are incorporated into the design and construction. If changes in the design are made, or if changed conditions are encountered during construction, the GED shall be notified. Supplemental recommendations may be required.

4.1 SITE PREPARATION

Site preparation may initially involve the demolition of the existing lighting fixtures, including their foundations. Following demolition, the construction area should be cleared of any vegetation and stripped of miscellaneous debris and other deleterious material. Organic matter and other material that may interfere with construction should be removed.

4.2 NEW LIGHT POLE FOUNDATIONS

We recommend new light poles be supported on cast-in-drilled-hole (CIDH) piles. Piles shall be spaced a minimum distance of 3 pile diameters on center, and the minimum diameter shall be 30 inches. Based on the light pole plan, as presented on Figure 2, the minimum spacing requirement will be met.

4.2.1 2017 LABC Seismic Design Parameters

Seismic design parameters for the project are provided in accordance with the 2017 Los Angeles Building Code (LABC). Latitude 34.133604°N and Longitude 118.207510°W coordinates were used for the site location.

Seismic Design Parameters

Parameter	Value	Reference
Site Class	D	ASCE 7-10 Table 20.3-1
S_s	2.703	ASCE 7-10 Figure 22-1
S_1	1.002	ASCE 7-10 Figure 22-2
S_{MS}	2.703	ASCE 7-10 Equation 11.4-1
S_{M1}	1.503	ASCE 7-10 Equation 11.4-2
S_{DS}	1.802	ASCE 7-10 Equation 11.4-3
S_{D1}	1.002	ASCE 7-10 Equation 11.4-4
T_O (seconds)	0.111	ASCE 7-10 Chapter 11
T_S (seconds)	0.556	ASCE 7-10 Chapter 11

4.2.2 Axial Capacity in Compression

The minimum pile embedment depth shall be 12 feet below the lowest adjacent grade. The actual depths may be deeper and will likely depend on the lateral load analysis, which shall be performed by the structural engineer. Axial compression capacities (i.e. loads) are presented on Figure 3 for 30-inch, 36-inch, and 42-inch diameter CIDH piles. The axial compression capacities presented on Figure 3 assume the piles develop their capacity solely from skin friction or side resistance. For our analyses, we assumed an effective friction angle of 30 degrees and no cohesion for the native soil.

The total settlement is not expected to exceed ½-inch provided the piles are properly constructed (see Section 4.2.5).

4.2.3 Axial Capacity in Tension

The allowable axial tensile capacity may be assumed to be ½ the axial capacity in compression for the 30-inch, 36-inch and 42-inch diameter CIDH piles (Figure 3). The weight of the concrete shaft may be added to the tensile capacity.

4.2.4 Lateral Load Behavior

The lateral load behavior of a CIDH pile was evaluated using the LPILE (Ensoft, 2016) software program. LPILE (2016) uses load deflection (p-y) curves to approximate the relationship between soil resistance and pile deflection. The lateral load behavior was evaluated a free head deflection of ½-inch. Also, we assumed a perfectly elastic pile and a cracked section. The modulus of elasticity for the cracked section was estimated to be 1802500 pounds per square inch (i.e. FS = 2).

The main inputs in the LPILE software for each soil layer are the unit weight and soil shear strength. The existing native soil was assumed to behave as “sand” with a total unit weight of 115 pcf, an effective friction angle of 30 degrees, and no cohesion. The results of the LPILE analyses are presented in Appendix B of this report.

4.2.5 CIDH Pile Construction

We expect the CIDH piles can be drilled using conventional equipment. Due to the relatively loose nature of the granular soil, caving conditions are anticipated. If caving is encountered, steel casing shall be used to support the sides of the pile excavations. If casing is installed, the inside diameter of the casing shall be at least as large as the diameter of the piles. Drilling shall be completed within the casing.

The contractor shall remove loose soil (i.e. slough) from the bottom of the pile excavation. The drilled holes shall be plumb to within a tolerance of 2 percent. Upon completion of drilling, secure covers shall be placed over the excavations. Concrete placement shall be completed within 12 hours of drilling and drilled holes shall not be left open overnight. CIDH pile excavations shall be observed and approved by the GED during drilling and prior to installation of the pole itself.

Depending on the final depths and construction methods, concrete placement by the pump and tremie method may be required. Concrete shall not be allowed to free fall more than 6 feet. Concrete placement shall be performed in a manner such that it does not hit the side of the drilled hole.

If temporary casing is utilized, it shall be raised slowly during concrete placement as the drilled hole is filled with concrete. The bottom of the casing shall remain a minimum of 3 feet below the level of concrete during the pour.

5.0 CLOSURE

If you have any questions about this report, please contact Joy Welling at (213) 847-0492.

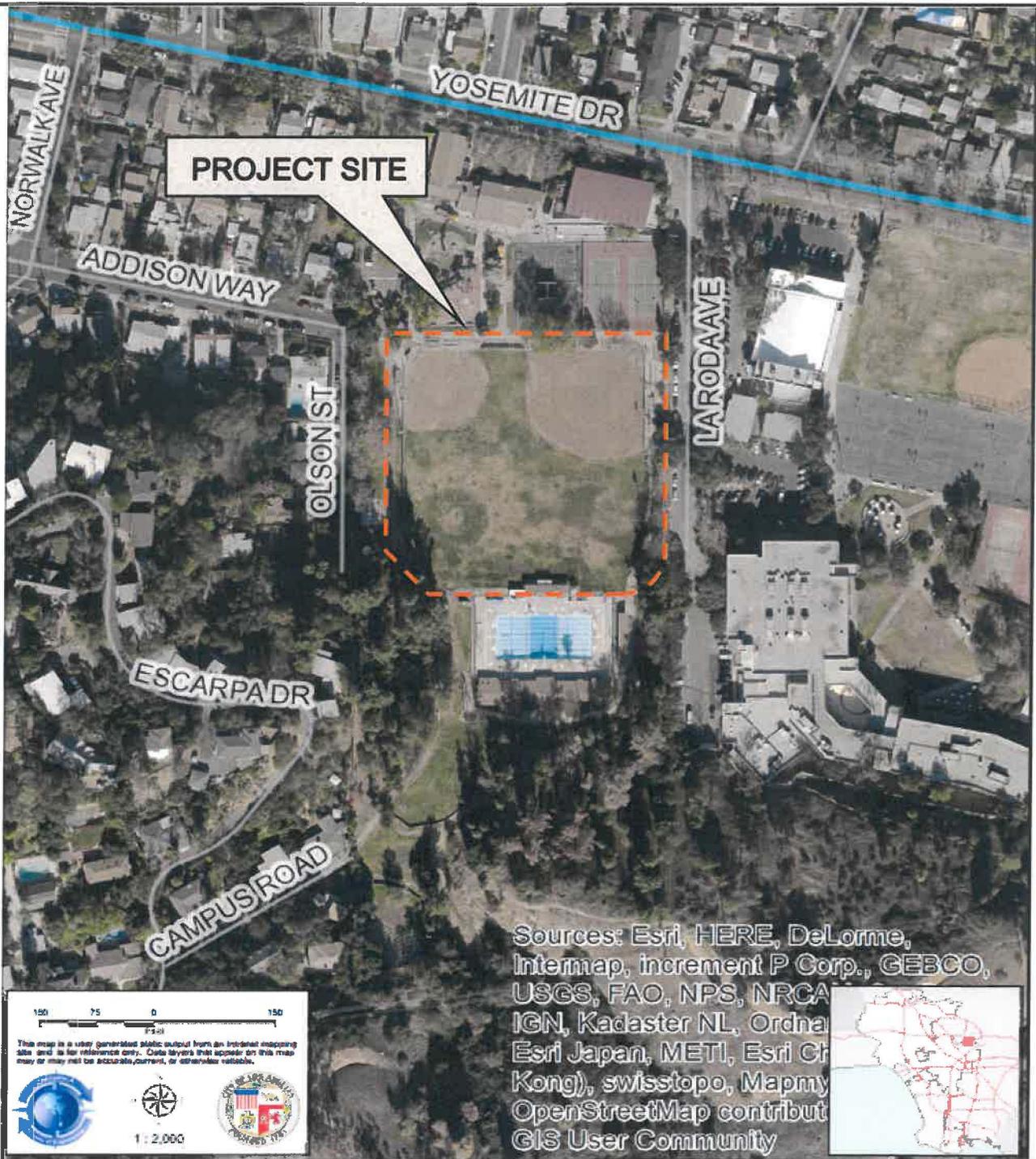


 10-12-17
Joy Welling, EIT 1557786
Civil Engineering Associate I

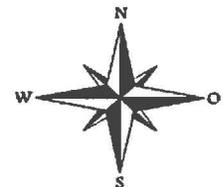
 10-12-17
Easton Forcier, GE 2948
Geotechnical Engineer I

- Figure 1 – Vicinity Map
- Figure 2 – Site Location Map
- Figure 3 – Allowable Axial Capacity of CIDH Pile in Compression
- Appendix A – Data Report by the City of Los Angeles, Department of General Services,
Standards Division
- Appendix B – LPILE Results

Figures



Reference: NavigateLA

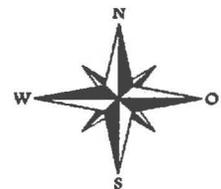


VICINITY MAP

Yosemite Recreation Center
1840 Yosemite Dr.
Los Angeles, CA 90041

BUREAU OF ENGINEERING
GEOTECHNICAL ENGINEERING DIVISION (GEO)
FIELD INVESTIGATION NO.: 16-103
DATE: OCTOBER 2017

Figure
No. 1



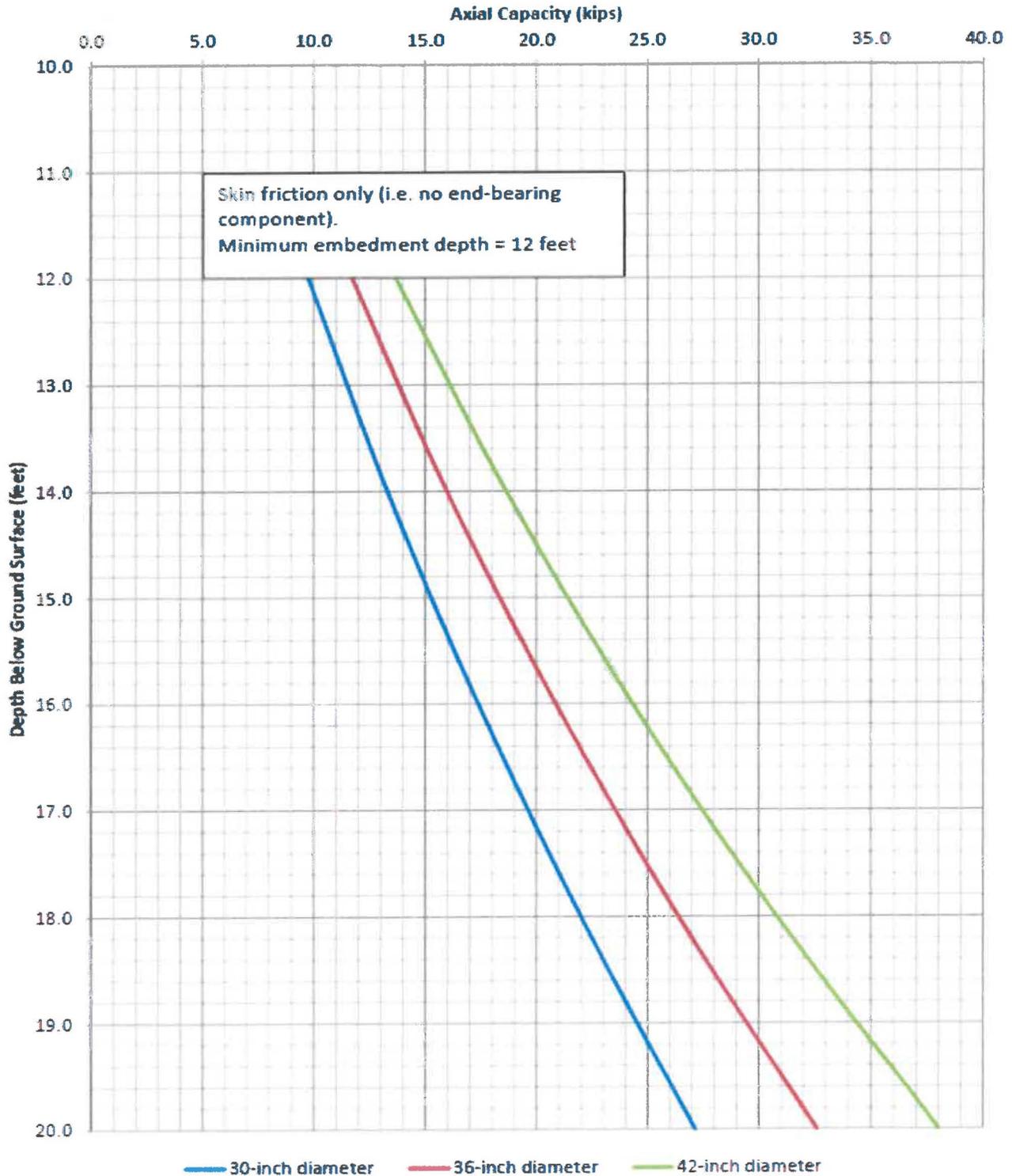
SITE LOCATION MAP

Yosemite Recreation Center
1840 Yosemite Dr.
Los Angeles, CA 90041

BUREAU OF ENGINEERING
GEOTECHNICAL ENGINEERING DIVISION (GEO)
FIELD INVESTIGATION NO.: 16-103
DATE: OCTOBER 2017

Figure
No. 2

Allowable Downward Capacity of CIDH Pile vs. Depth



Yosemite Recreation Center
1840 Yosemite Dr.
Los Angeles, CA 90041

BUREAU OF ENGINEERING
GEOTECHNICAL ENGINEERING DIVISION (GEO)
FIELD INVESTIGATION NO.: 16-103
DATE: OCTOBER 2017

Figure
No. 3

Appendix A

City of Los Angeles, Department of General Services, Standards Division

Data Report

**CITY OF LOS ANGELES
DEPARTMENT OF GENERAL SERVICES
STANDARDS DIVISION**

**YOSEMITE RECREATION
CENTER LIGHTING**

LAB NO. 140-6092

**W.O NO. E170514A
SEPTEMBER 2017**

GEOTECHNICAL SERVICES FILE: 16-103

**GEOTECHNICAL DIVISION
ENGINEERING
2017 SEP 19 AM 11: 04**

CITY OF LOS ANGELES
DEPARTMENT OF GENERAL SERVICES

STANDARDS
2319 DORRIS PLACE
LOS ANGELES, CA 90031
(213) 485-2242
fax (213) 485-5075

Yosemite Recreation
Center Lighting
W.O. No. E170514A
File No. 16-103

Lab. No. 140-6092

Received: 05-11-17

NTP: 06-24-17

Reported: 09-06-17

TO: Gary L. Moore, City Engineer.
Public Works / Bureau of Engineering

Attention: Patrick Schmidt

Report of
SUBSURFACE INVESTIGATION

Transmitted are the results of subsurface investigation performed by Standards on the above-named project as requested by the Geotechnical Engineering Group (GEO) of the Bureau of Engineering. The logs of the test borings, the Unified Soil Classification and the results of the laboratory tests requested by the Engineer are parts of this report. The descriptions reported on the "Log of Test Boring" sheets are based on field identification procedures, examination of the samples in the laboratory and soil classification tests. The soil classification is based on the attached Unified Soils Classification System.

Two test borings were drilled on this project with a truck-mounted Central Mine Equipment Model-75HT drill rig using 6inch diameter convention flight augers. Standard Penetration Test (SPT) ASTM D1586 was performed. The SPT test involves penetration of soil around the tip of a Split Spoon sampler for a condition of constant energy transmittal. The Split Spoon, 2-inch outside diameter (O.D.) by 1³/₈-inch inside diameter (I.D.), is driven eighteen (18) inches. The sampler is seated in the first six (6) inches and the number of blows required to drive the sampler the last twelve (12) inches is recorded as the value SPT blow count. The driving energy is provided by a 140-pound automatic trip hammer dropped thirty (30) inches at depths indicated on the log sheets.

Organic Vapor Analyzer (OVA) readings and Lower Explosive Limit (LEL) readings were taken during the drilling operation with a Photovac Inc. Model Microfid I/SC EXIA and RKI Instruments Model Eagle devices. The OVA readings were taken 2-ft above the test-boring hole at intervals when the drilling operation reached each sampling depth. OVA readings were also taken in the bulk soil sample bags after soil collection. LEL readings were taken above the augers prior to soil sampling.

The following tests were performed on samples from the test borings:

Grain Size Analysis/Hydrometer (ASTM D422)

Liquid Limit (ASTM D4318 – three point method)

Plasticity Index (ASTM D4318)

Geotechnical Engineering Group gave the Notice to Proceed with the subsurface investigation to Standards on 06-12-17. Joy Welling of your Bureau was notified at least 48 hours prior to the drilling and sampling operations. A boring location map is included in this report.

All soil samples for the above-named project that were delivered to the Standard Foundation Laboratory are presently being stored. These samples will be discarded 45 days after the date of this report unless a specific written request to retain the samples for additional testing or for a longer storage period is submitted by your Bureau.



RAY H. SOLOMON, Director
General Services/Standards

RHS:JV:KSN: m



Legend:

 = Test Boring Location

Test Hole No., Boring Coordinates:

B-1, 34° 07' 55.53" North, 118° 12' 28.89" West
 B-2, 34° 07' 56.65" North, 118° 12' 26.10" West

CITY OF LOS ANGELES
 DEPARTMENT OF GENERAL SERVICES
 STANDARDS DIVISION

TEST BORING
 LOCATION MAP
 & AERIAL PHOTO

PROJECT TITLE: Yosemite Recreation Center Lighting

W.O. NO. E170514A

LAB. NO. 140-6092

Checked By: JV/KSN

DATE: 07-18-2017

Sheet 1 of 1

LOG OF TEST BORING

LAB NO. : 140- 6092

PROJECT: Yosemite Recreation Center Lighting

BORING NO.: B-1

ELEVATION: 593' MSL

DRILLING DATE: 06-28-17

BORING COORDINATES: 34° 07' 55.53" North, 118° 12' 28.59" West

DRILL RIG TYPE: CME-55HT using 6" diameter conventional flight augers

DEPTH TO STANDING WATER: None

DEPTH TO WATER SEEPAGE: nONE

DRILLER: Ramirez

LOGGER: Roth

ENGINEER: Welling

ELEVATION / DEPTH (ft)	SOIL SYMBOLS, SAMPLER SYMBOLS AND BLOWS/FOOT	USCS	Field Description	Standard Penetration Readings		
				1st 6"	2nd 6"	3rd 6"
0		SM	2" Bermuda Grass Brown poorly graded fine-medium sand with some silt; moist and dense. Bulk soil sample was taken from 2"-2½' depth.	1	2	2
590		SM	Silty sand.	3	5	6
5			2	2	3	
585			6	5	5	
10			3	5	4	
15			5	6	6	
20	Encountered clayey sand at 20' depth.			5	6	6
570	--- No free water. --- LEL reading=0% & OVA reading=0 ppm at all sampling depths. ---					
25						
565						
30						
560						
35						
555						

LOG OF TEST BORING

LAB NO. : 140- 6092

PROJECT: Yosemite Recreation Center Lighting

BORING NO.: B-2

ELEVATION: 595' MSL

DRILLING DATE: 06-28-17

BORING COORDINATES: 34° 07' 56.65" North, 118° 12' 26.10" West

DRILL RIG TYPE: CME-55HT using 6" diameter conventional flight augers

DEPTH TO STANDING WATER: None

DEPTH TO WATER SEEPAGE: nONE

DRILLER: Ramirez

LOGGER: Roth

ENGINEER: Welling

ELEVATION / DEPTH (ft)	SOIL SYMBOLS, SAMPLER SYMBOLS AND BLOWS/FOOT	USCS	Field Description	Standard Penetration Readings		
				1st 6"	2nd 6"	3rd 6"
<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>595 — 0</p> <p>590 — 5</p> <p>585 — 10</p> <p>580 — 15</p> <p>575 — 20</p> <p>570 — 25</p> <p>565 — 30</p> <p>560 — 35</p> </div> </div>	<p>SP/SM</p> <hr/> <p>SC-SM</p> <hr/> <p>SC</p>	<p>2" Bermuda Grass Light brown silty finesand with a trace of fine gravel; dry and dense. Bulk soil sample was taken from 2"-2½' depth.</p> <p>Soil is moist from 5' to 21' depth.</p> <p>Silty, clayey sand.</p> <p>Encountered some clay binder from 15' to 21' depth.</p> <p>Encountered clayey sand at 20' depth.</p> <p style="text-align: center;">--- No free water. --- LEL reading=0% & OVA reading=0 ppm at all sampling depths. ---</p>	<p>4 4 5</p> <p>7 10 9</p> <p>3 3 3</p> <p>7 7 7</p> <p>4 3 5</p> <p>3 5 6</p>			

KEY TO SYMBOLS

Symbol Description

Strata symbols



Bermuda Grass



Silty sands, sand-silt mixtures



Poorly graded sand with silt.



Silty, clayey sand.



Clayey sands, sand-clay mixtures

Soil Samplers



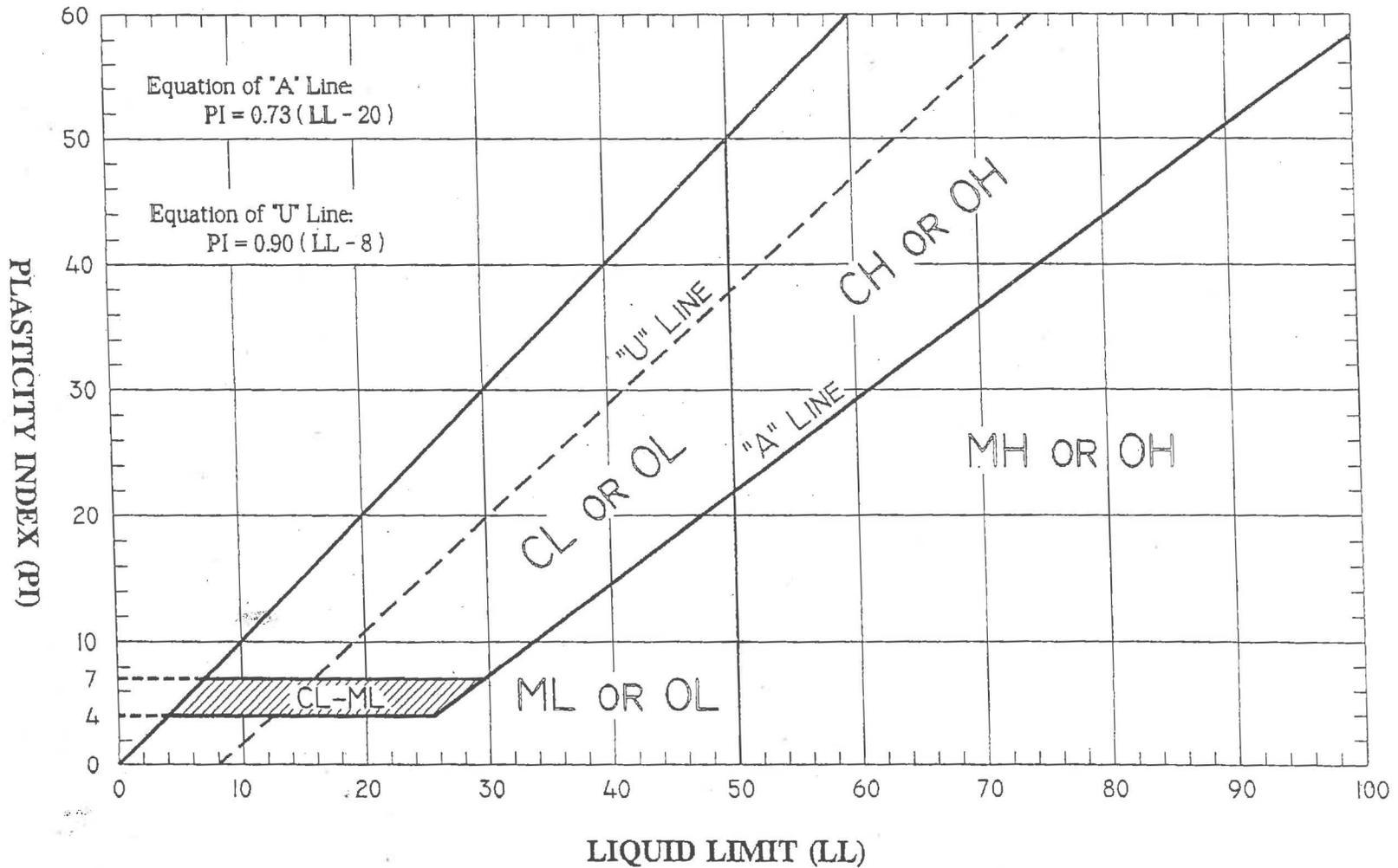
Standard penetration test

Notes:

1. Two exploratory borings were drilled on 06/28/2017 with a CME-55HT using 6" diameter conventional flight augers.
2. Free water was not encountered during the drilling of this project.
3. Boring locations were provided by Geotechnical Engineering Group and verified by Standards.
4. Abbreviations used on logs:

N/o = north of	NCF = north curb face	NE = northeast
S/o = south of	SCF = south curb face	NW = northwest
E/o = east of	ECF = east curb face	SE = southeast
W/o = west of	WCF = west curb face	SW = southwest
CL = center line	PL = property line	
AC = asphalt concrete	PCC = Portland cement concrete	
OVA = organic vapor analyzer	LEL = lower explosive limit	
PPM = parts per million	HT = high torque	
5. The stratification lines indicated on the boring maps and profiles represent the approximate boundary between material types and the transition may be gradual.
6. The materials, boundaries, and conditions have been established only at the boring locations, and are not necessarily representative of subsurface conditions elsewhere across the site.

CLASSIFICATION OF FINE-GRAINED SOILS *



* Reference:
U.S. Army Corps of Engineers

CITY OF LOS ANGELES
DEPARTMENT OF GENERAL SERVICES
STANDARDS DIVISION
2319 DORRIS PLACE
LOS ANGELES CA 90031
(213) 485-2242

UNIFIED SOIL CLASSIFICATION SYSTEM *

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES		
COARSE GRAINED SOILS (More than 50% of material is LARGER than No.200 sieve size)	GRAVELS (More than 50% of coarse fraction is LARGER than the No.4 sieve size)	CLEAN GRAVELS (Little or no fines)		GW	Well graded gravels, gravel-sand mixtures, little or no fines.	
		GRAVELS WITH FINES (Appreciable amount of fines)		GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.	
		SANDS (More than 50% of coarse fraction is SMALLER than the No.4 sieve size)	CLEAN SANDS (Little or no fines)		SW	Well graded sands, gravelly sands, little or no fines.
			SANDS WITH FINES (Appreciable amount of fines)		SP	Poorly graded sands or gravelly sands, little or no fines.
	FINE GRAINED SOILS (More than 50% of material is SMALLER than No.200 sieve size)	SILTS AND CLAYS (Liquid limit LESS than 50)		SM	Silty sands, sand-silt mixtures.	
				SC	Clayey sands, sand-clay mixtures.	
				ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.	
		SILTS AND CLAYS (Liquid limit GREATER than 50)		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.	
			OL	Organic silts and organic silty clays of low plasticity.		
			MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.		
			CH	Inorganic clays of high plasticity, fat clays.		
			OH	Organic clays of medium to high plasticity, organic silts.		
HIGHLY ORGANIC SOILS				Pt	Peat and other highly organic soils.	

BOUNDARY CLASSIFICATIONS: Soils possessing characteristics of two groups are designated by combinations of group symbols.

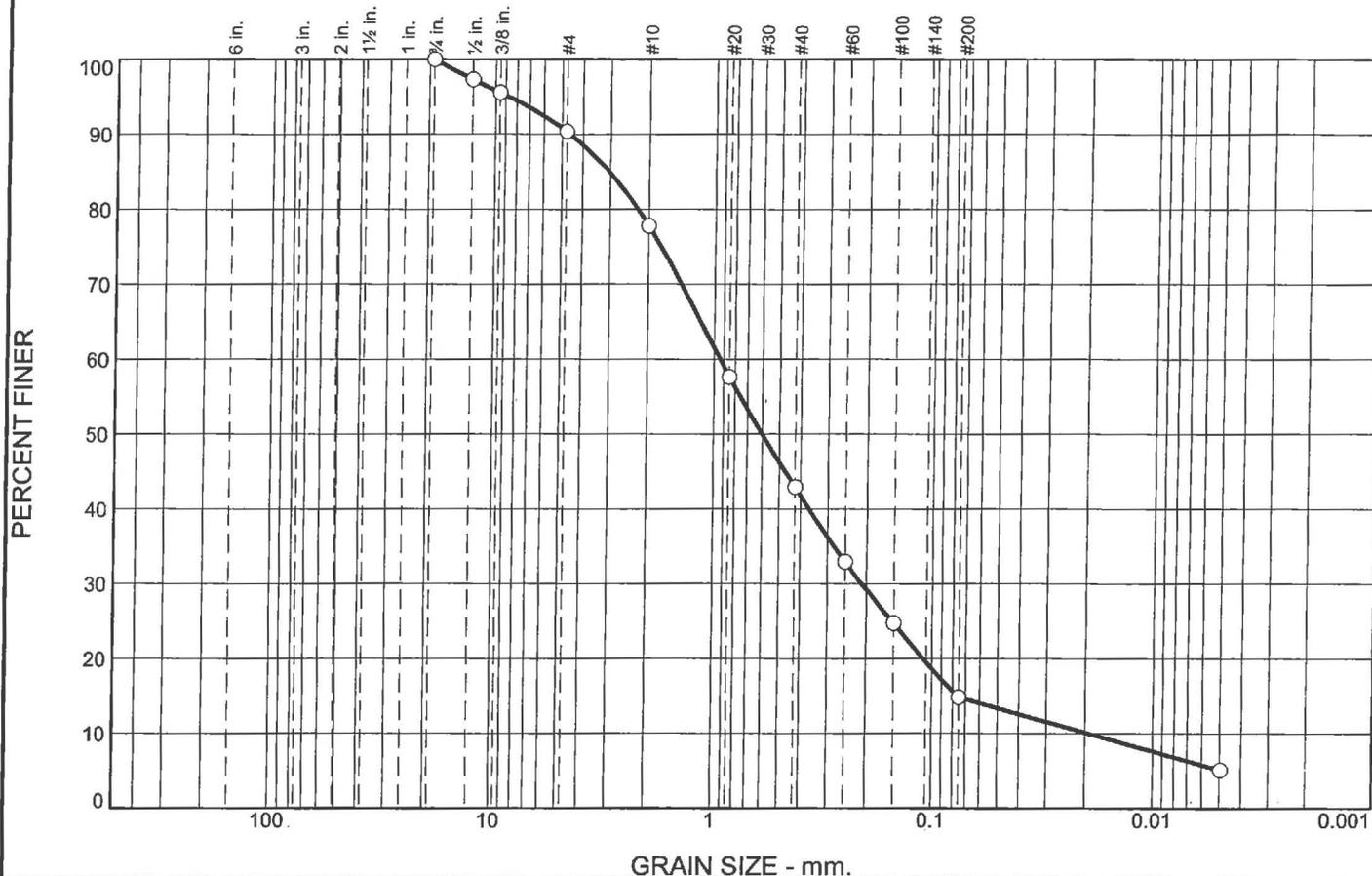
P A R T I C L E S I Z E L I M I T S

SILT OR CLAY	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		
	No.200	No.40	No.10	No.4	3/4 in.	3 in.	12 in.
U. S. S T A N D A R D S I E V E S I Z E							

* Reference:
 The Unified Soil Classification System, Corps of Engineers,
 U.S. Army Technical Memorandum No. 3-367, Vol. I, March 1953.
 (Revised April, 1960)

CITY OF LOS ANGELES
 DEPARTMENT OF GENERAL SERVICES
 STANDARDS DIVISION
 2319 DORRIS PLACE
 LOS ANGELES CA 90031
 (213) 485-2242

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	10	12	35	28	10	5

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100		
1/2"	97		
3/8"	96		
#4	90		
#10	78		
#20	58		
#40	43		
#60	33		
#100	25		
#200	15		
0.0050 mm.	5.1		

Soil Description
Silty sand

Atterberg Limits
 PL= NP LL= NV PI= NP

Coefficients
 D₉₀= 4.5601 D₈₅= 3.0290 D₆₀= 0.9388
 D₅₀= 0.6022 D₃₀= 0.2096 D₁₅= 0.0759
 D₁₀= 0.0193 C_u= 48.56 C_c= 2.42

Classification
 USCS= SM AASHTO= A-1-b

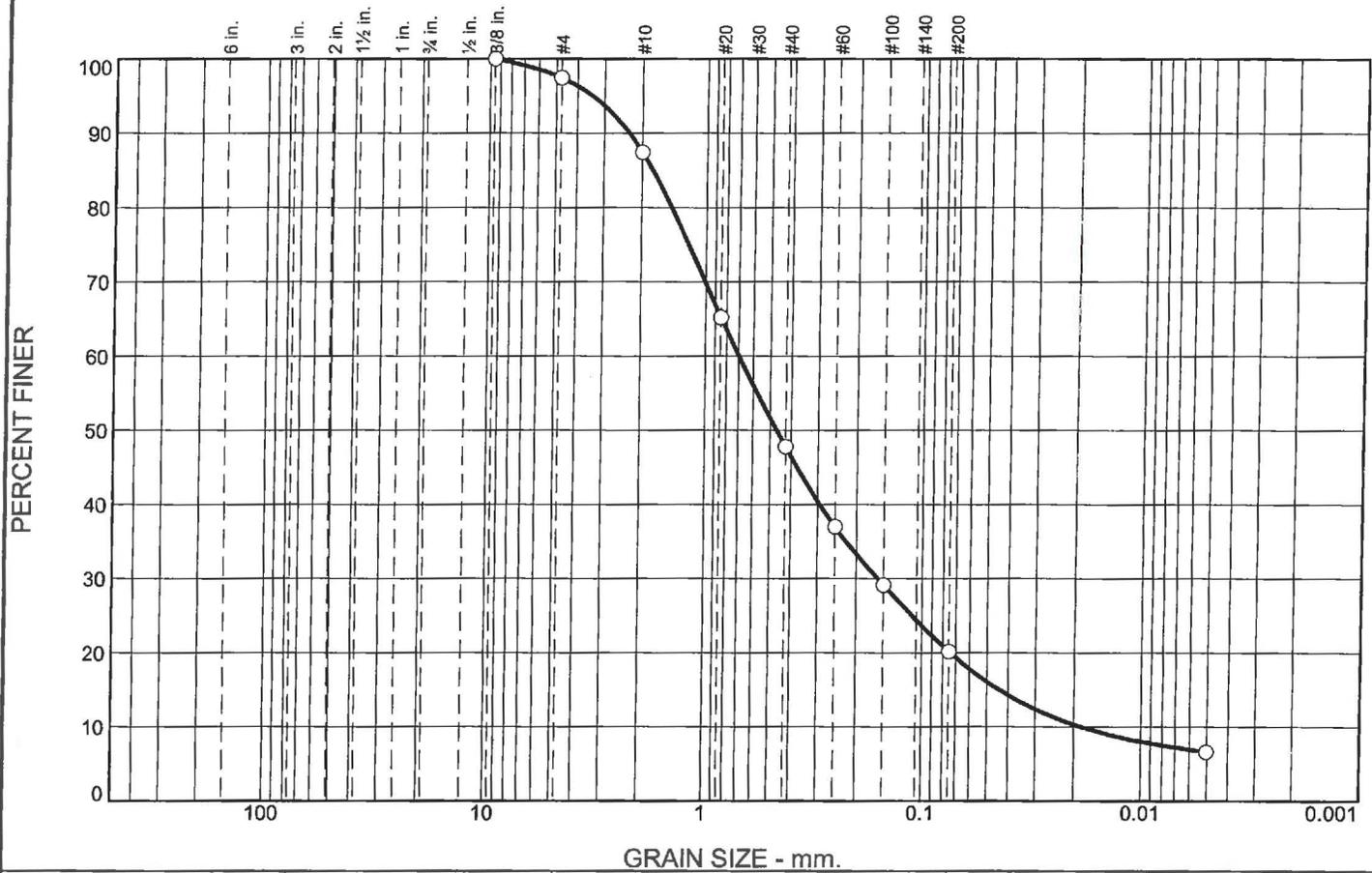
Remarks
 Field moisture (%): 5.2

* (no specification provided)

Sample Number: B-1 Depth: 5' Date: 06/28/2017

CITY OF LOS ANGELES - STANDARDS DIVISION	Client: Geotechnical Engineering Group Project: Yosemite Recreation Center Lighting Project No: 140-6092/E170514A Figure B1@5
--	--

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	3	10	39	28	13	7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100		
#4	97		
#10	87		
#20	65		
#40	48		
#60	37		
#100	29		
#200	20		
0.0050 mm.	6.6		

Soil Description
Silty sand

Atterberg Limits
 PL= NP LL= NV PI= NP

Coefficients
 D₉₀= 2.3010 D₈₅= 1.7832 D₆₀= 0.7000
 D₅₀= 0.4676 D₃₀= 0.1592 D₁₅= 0.0436
 D₁₀= 0.0185 C_u= 37.94 C_c= 1.96

Classification
 USCS= SM AASHTO= A-1-b

Remarks
 Field moisture (%): 8.5

* (no specification provided)

Sample Number: B-1 Depth: 10'

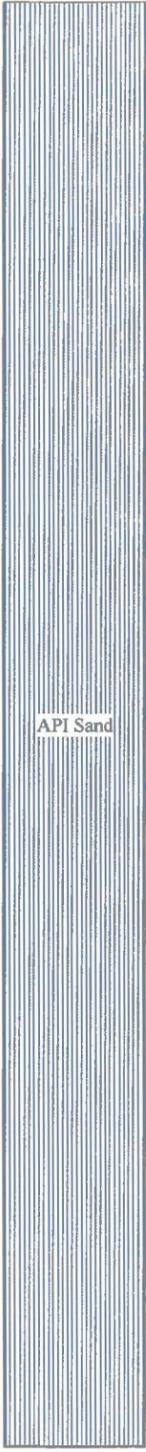
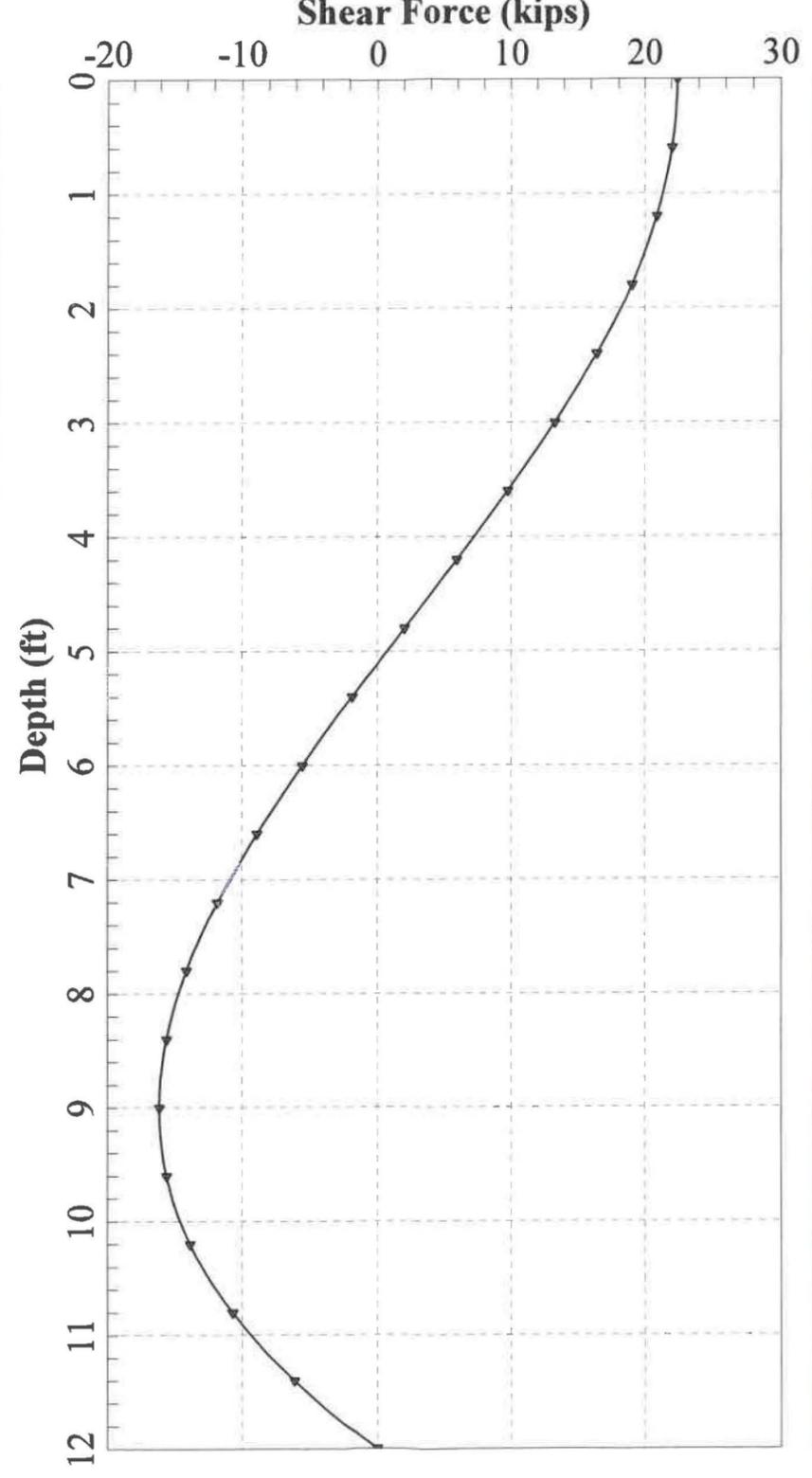
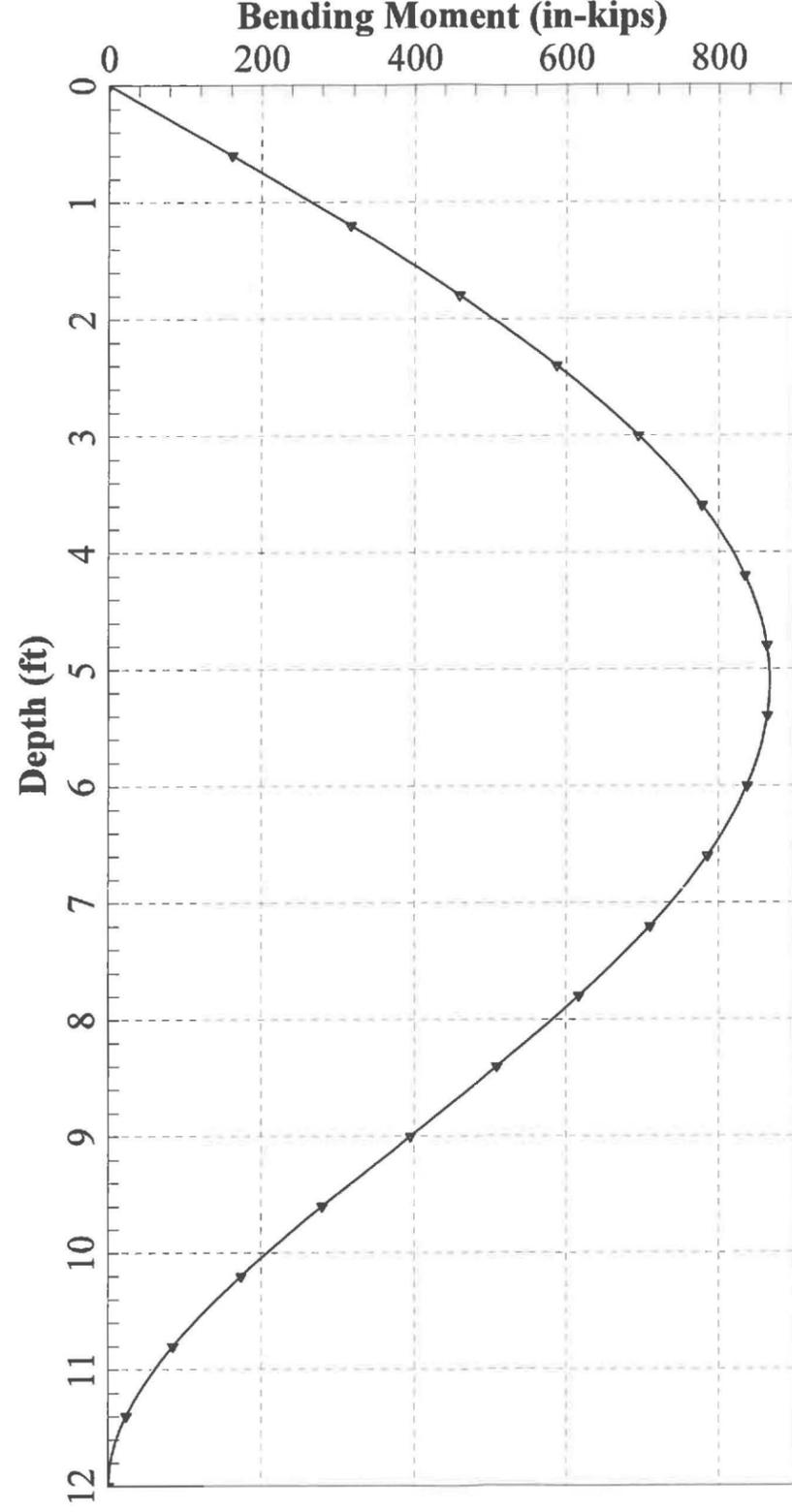
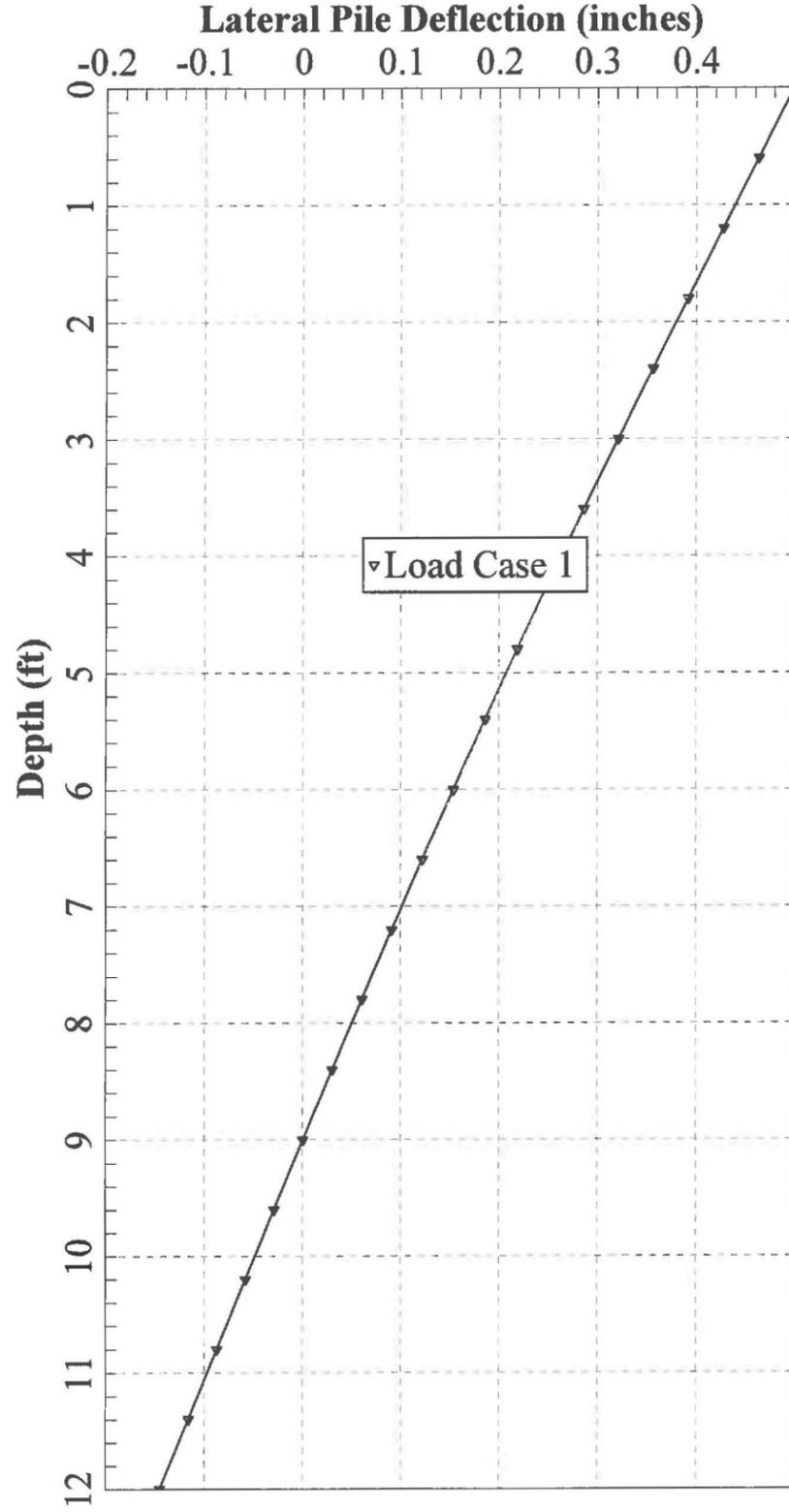
Date: 06/28/2017

CITY OF LOS ANGELES - STANDARDS DIVISION	Client: Geotechnical Engineering Group Project: Yosemite Recreation Center Lighting Project No: 140-6092/E170514A
	Figure B1@10

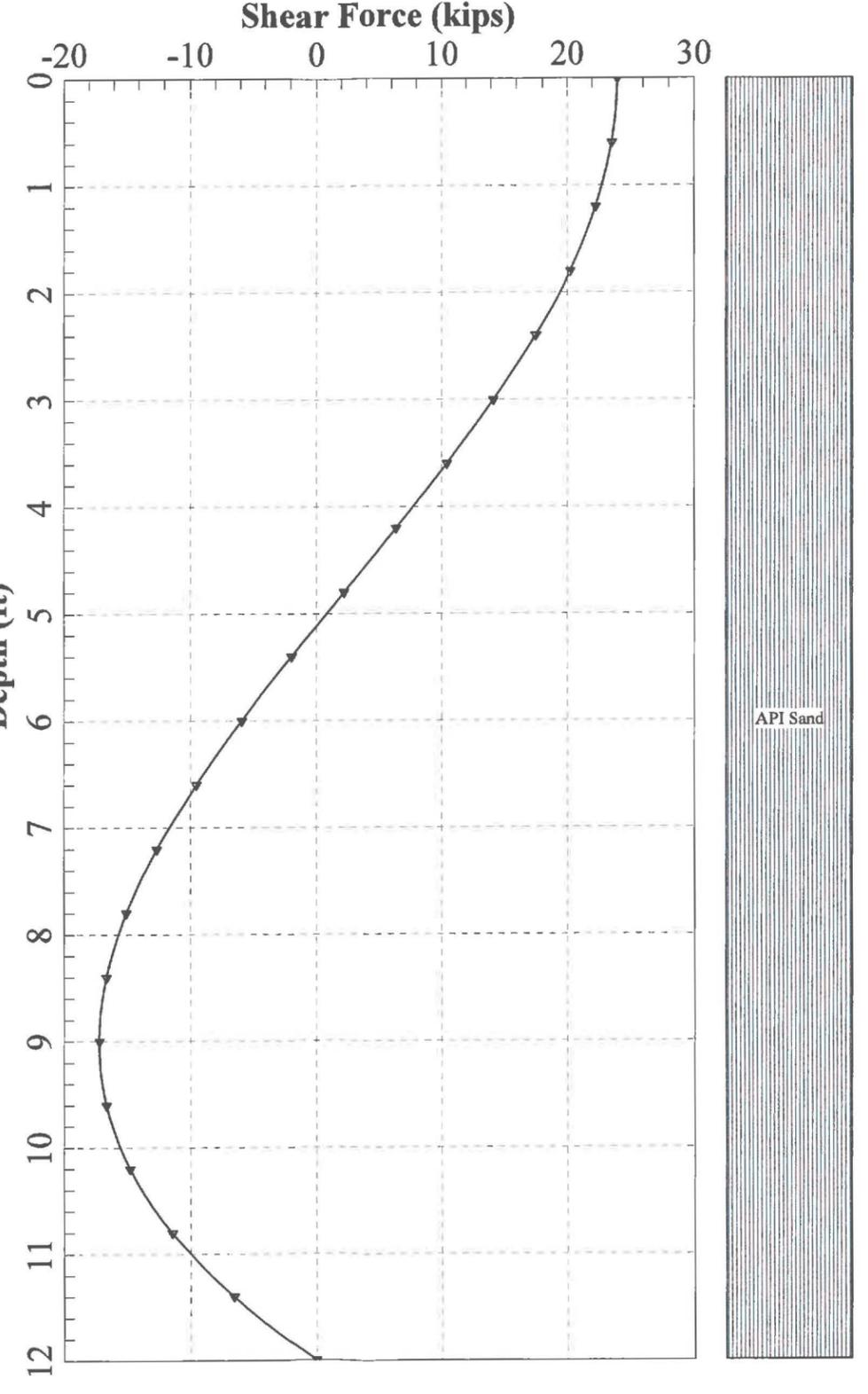
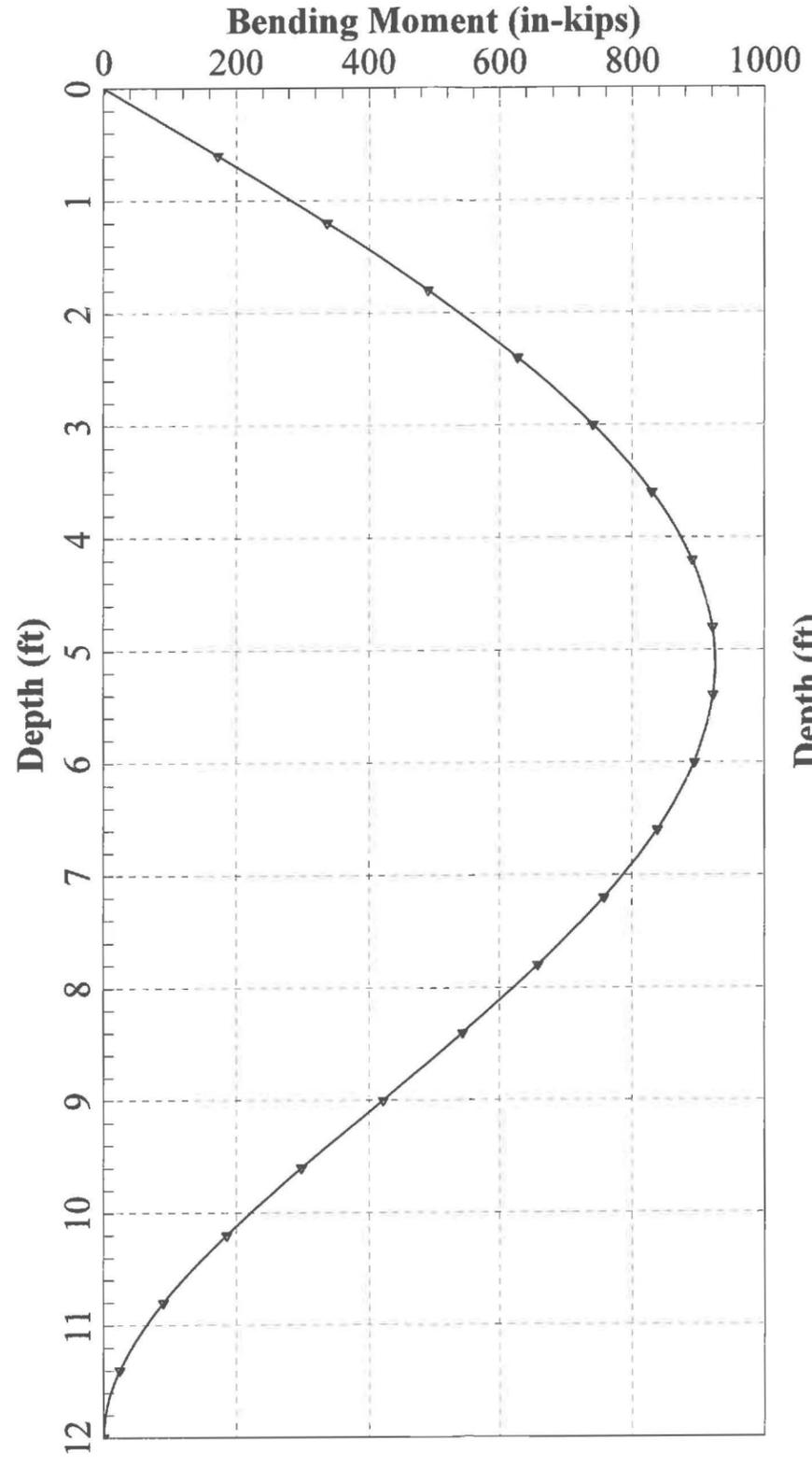
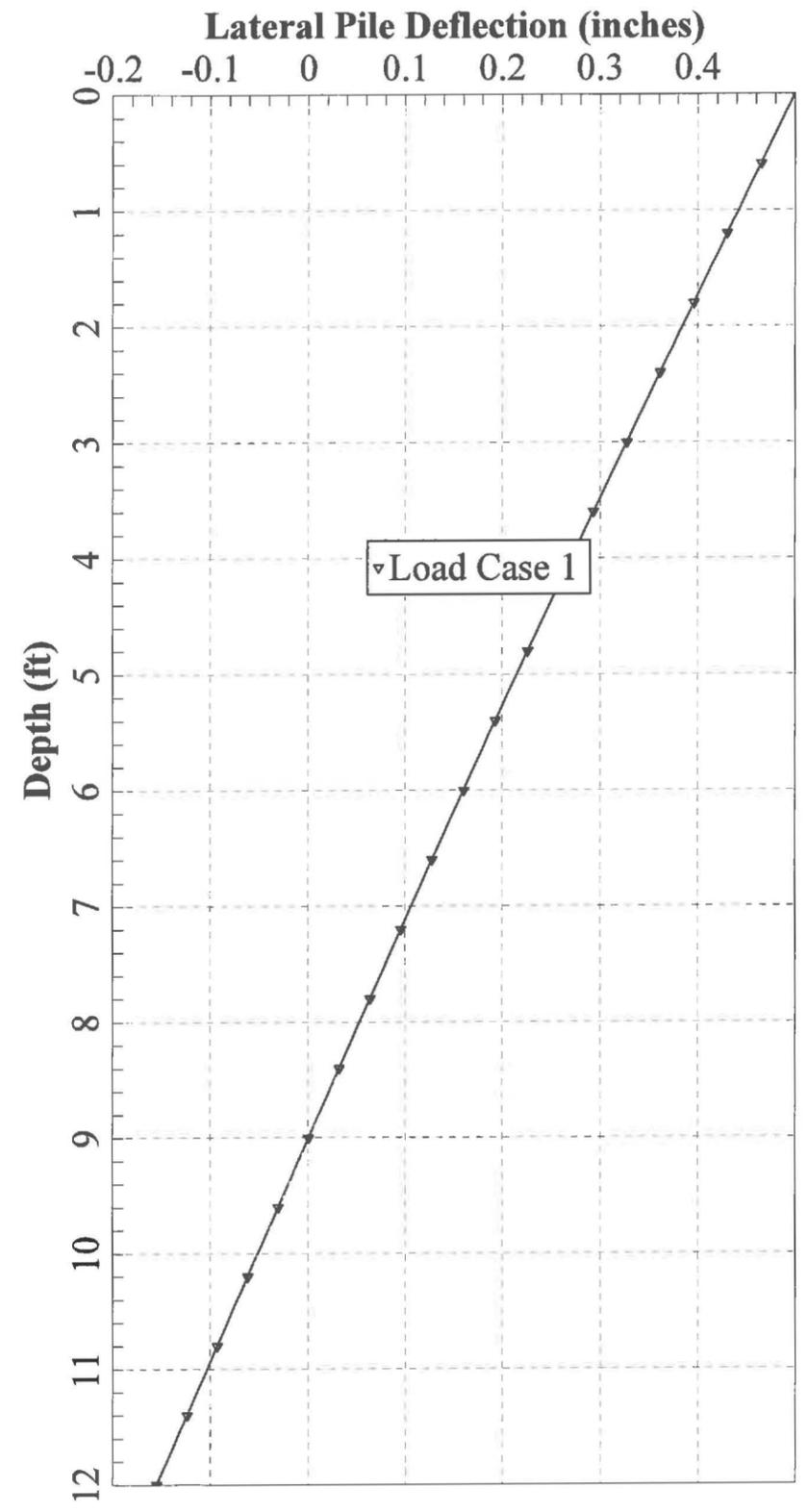
Appendix B

LPILE Results

30-inch diameter CIDH pile - 12-foot depth



36-inch diameter CIDH pile - 12-foot depth



42-inch diameter CIDH pile - 12-foot depth

