GENERAL NOTES

1. THESES DRAWINGS AND SPECIFICATIONS ARE INTENDED TO COVER A COMPLETE INSTALLATION OF SYSTEMS. THE OMISSION OR EXPRESSED REFERENCE TO ANY ITEM OF LABOR OR MATERIALS REQUIRED FOR THE PROPER EXECUTION OF THE WORK IN ACCORDANCE WITH PRESENT PRACTICE OF THE TRADE SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING SUCH ADDITIONAL LABOR AND MATERIALS.

2. THESE PLANS AND SPECIFICATIONS AND ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH ALL LEGAL AND INDUSTRY REQUIREMENTS AND STANDARDS INCLUDING WITHOUT LIMITATION THE FOLLOWING:
   a. CALIFORNIA CODE OF REGULATIONS TITLE 24, PARTS 1 AND 2 (CALIFORNIA BUILDING CODE), 2019 EDITION.
   b. CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 3 (CALIFORNIA ELECTRICAL CODE), 2019 EDITION.
   c. CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 6 (CALIFORNIA ENERGY CODE), 2019 EDITION.
   d. CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 9 (CALIFORNIA FIRE CODE), 2019 EDITION.
   e. OTHER REGULATING AGENCIES WHICH MAY HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.
   f. THE ELECTRICAL SYSTEMS FUNCTIONALITY STANDARDS SET FORTH IN TITLE 7 OF THE CALIFORNIA CIVIL CODE (THE "RIGHT TO REPAIR ACT").
   g. THE MANUFACTURER'S REQUIREMENTS OR RECOMMENDATIONS FOR ANY INCORPORATED PRODUCTS.
   h. THE MOST CURRENT APPROVED ISSUES OF ANY NOTED SPECIFICATIONS, CODES AND STANDARDS, INCLUDING SUPPLEMENTS, UNLESS NOTED OTHERWISE.

3. THE PLANS REPRESENT ONLY THE FINISHED ELECTRICAL, FIRE ALARM AND LOW VOLTAGE SYSTEMS, AND THEY ARE NOT INTENDED TO INDICATE OR REQUIRE ANY CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES.

4. IN USING THE PLANS FOR BIDDING OR CONSTRUCTION PURPOSES, THE CONTRACTOR IS REQUIRED TO REVIEW ALL OF THE PROJECT'S CONSTRUCTION DOCUMENTS AS A WHOLE IN ORDER TO IDENTIFY ALL REQUIREMENTS THAT DIRECTLY OR INDIRECTLY AFFECT ITS PORTION OF THE ELECTRICAL WORK, EVEN REQUIREMENTS LOCATED IN SECTIONS DESIGNATED AS APPLICABLE TO OTHER TRADES. IN CASE OF CONFLICTS, THE CONTRACTOR SHALL EITHER OBTAIN DIRECTION FROM AN APPROPRIATE OWNER REPRESENTATIVE OR OTHERWISE APPLY THE MORE STRINGENT REQUIREMENT.

5. IN INTERPRETING THE PLANS, THE FOLLOWING GENERAL RULES APPLY:
   a. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DRAWINGS.
   b. SCALED DIMENSIONS AND GRAPHICALLY SHOWN LOCATIONS ARE TO BE CONSIDERED ONLY APPROXIMATE, FIELD VERIFY DIMENSIONS PRIOR TO BID.

6. IN INTERPRETING THE PLANS, THE FOLLOWING GENERAL RULES APPLY:
   a. BECAUSE THE PLANS ARE INTENDED TO SET FORTH THE REQUIREMENTS FOR CONSTRUCTION IN ONLY AN INDUSTRY-STANDARD LEVEL OF QUALITY AND DETAIL, AND THEREFORE ARE INTENDED TO BE SUPPLEMENTED BY APPROPRIATE REQUESTS FOR CLARIFICATION AND INFORMATION, ERRORS AND OMISSIONS AND TO BRING THESE ERRORS AND OMISSIONS TO THE ATTENTION OF AN APPROPRIATE OWNER REPRESENTATIVE IN A TIMELY MANNER AND ASSUMES THE RISK OF THE CONSEQUENCES OF FAILING TO DO SO BEFORE BIDDING OR OTHERWISE PROCEEDING.
   b. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION, AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OR INCONSISTENCIES.

7. SUBMITTALS WILL BE REVIEWED BY THE ELECTRICAL ENGINEER, IF AT ALL, ONLY PURSUANT TO THE INDUSTRY-STANDARD PROTOCOL SET FORTH IN AIA DOCUMENT A201, AND IN NO EVENT WILL THE THE SUBMITTAL REVIEW PROCESS RELIEVE OR LESSEN THE SUBMITTING CONTRACTOR'S RESPONSIBILITY FOR AN INAPPROPRIATE SUBMITTAL.

8. IN NO EVENT WILL ANY SITE VISITS BY THE ELECTRICAL ENGINEER CONCERN CONSTRUCTION MEANS AND METHODS OR CONSTRUCTION SAFETY, AND ALL SUCH MATTERS SHALL REMAIN THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

9. COPIES OF THE THE PLANS PROVIDED IN ANY ELECTRONIC FORM ARE SUBJECT TO THE SAME PROVISIONS AS THE OTHER INSTRUMENTS OF SERVICE PREPARED BY OR ON BEHALF OF ELECTRICAL ENGINEER FOR THE PROJECT, INCLUDING WITHOUT LIMITATION THE ENGINEER'S COMMON LAW, STATUTORY OR OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS. A RECIPIENT IS GRANTED AT MOST A TRANSFERABLE NON-EXCLUSIVE LICENSE TO REUSE THE PLANS SOLELY FOR PROJECT PURPOSES; AND NO RECIPIENT IS AUTHORIZED TO USE OR TO ALLOW THE USE OF ALL OR ANY PORTION OF THESE PLANS FOR ANY OTHER PURPOSE, AND ANY USE FOR ANY OTHER PURPOSE WOULD CONSTITUTE ACTIONABLE PLAGIARISM. ELECTRICAL ENGINEER PROVIDES DOCUMENTS IN AN ELECTRONIC FORM ONLY IN ITS STANDARD FORMATS AND CONVENTIONS AND WITH NO GUARANTEE OF COMPATIBILITY WITH ANY RECIPIENT'S SOFTWARE OR HARDWARE AND ANY USE WITH OR CONVERSION TO OTHER FORMATS OR CONVENTIONS, OR THE USE WITH ANY PARTICULAR SOFTWARE OR HARDWARE, IS AT THE RECIPIENT'S SOLE RISK.

10. ALL CONDUIT, STRUCTURES AND INSTALLATION FOR POWER AND TELEPHONE UTILITIES SHALL CONFORM WITH THE REQUIREMENTS (MINIMUM BEND RADIUS, CONCRETE ENCASEMENT, CONDUIT, TYPE, ETC.) OF THE UTILITIES COMPANY. VERIFY ALL REQUIREMENTS WITH UTILITY COMPANY PRIOR TO BID AND INCLUDE ALL COSTS IN BID.

11. CONTRACTOR SHALL OBTAIN SOUTHERN CALIFORNIA EDISON CO. (SCE CO.) CONSTRUCTION DRAWINGS PRIOR TO CONSTRUCTION AND SHALL INSTALL POWER CONDUIT AND STRUCTURES ACCORDING TO SCE CO. DRAWINGS. EXTRA PAYMENTS WILL NOT BE GRANTED FOR FAILURE TO DO SO.

12. LOCATIONS OF EXISTING UTILITIES ARE NOT SHOWN AND CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING DUCTS, PIPING OR CONDUIT, ETC. AND TO PREVENT HAZARD TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN AND INSTALLED BY ANY OTHER CONTRACTS. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED BY ANY OTHER CONTRACTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS

13. REFER TO THE DRAWINGS AND SHOP DRAWINGS OF OTHER TRADES FOR ADDITIONAL DETAILS WHICH AFFECT THE PROPER INSTALLATION OF THIS WORK.

14. THE DRAWINGS INDICATE, IN A DIAGRAMMATIC MANNER, THE DESIRED LOCATIONS AND ARRANGEMENT OF THE COMPONENTS OF ELECTRICAL WORK. DETERMINE EXACT CONDUIT ROUTING, CONDUIT BENDS, AUXILIARY JUNCTION BOXES, SUPPORTS AND UNDEFINED CONSTRUCTION DETAILS AS A JOB CONDITION TO BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE CODE REQUIREMENTS. PROPER JUDGEMENT MUST BE EXERCISED IN EXECUTING THE WORK SO AS TO SECURE THE BEST POSSIBLE INSTALLATION IN THE AVAILABLE SPACE AND TO OVERCOME LOCAL DIFFICULTIES DUE TO SPACE LIMITATIONS OR INTERFERENCE OF CONDITIONS ENCOUNTERED.

15. IN THE EVENT CHANGES IN THE INDICATED LOCATIONS OR ARRANGEMENTS ARE NECESSARY, DUE TO DEVELOPED CONDITIONS IN THE BUILDING CONSTRUCTION OR REARRANGEMENT OF EQUIPMENT, SUCH CHANGES SHALL BE MADE WITHOUT COST PROVIDING THE CHANGE IS ORDERED BEFORE THE CONDUIT RUNS, ETC., AND WORK DIRECTLY CONNECTED TO SAME IS INSTALLED AND NO EXTRA MATERIALS ARE REQUIRED.

16. ELECTRICAL PLANS DO NOT SHOW ELECTRICAL REQUIREMENTS FOR MECHANICAL AND PLUMBING EQUIPMENT CONTROL. REFER TO MECHANICAL AND PLUMBING PLANS AND SPECIFICATIONS. WHERE EQUIPMENT IS INDICATED TO BE BY ELECTRICAL CONTRACTOR PROVIDE ALL CONDUIT, WIRE, J-BOX, OUTLET BOXES, RELAY SWITCHES, TIME SWITCHES, CONTROL CIRCUITS, ETC. REQUIRED FOR A COMPLETE AND OPERABLE MECHANICAL AND PLUMBING INSTALLATION. ALL WIRE SHALL BE INSTALLED IN CODE SIZED CONDUIT.

17. LOCATIONS OF DISCONNECT SWITCHES AND CONNECTIONS FOR MECHANICAL AND PLUMBING EQUIPMENT ARE SHOWN DIAGRAMMATICALLY. VERIFY ACTUAL CONNECTION LOCATIONS WITH EQUIPMENT SHOP DRAWINGS AND LOCATE DISCONNECT SWITCHES TO PROVIDE CODE REQUIRED CLEARANCES AND ACCESS. DISCONNECT SWITCHES ON ROOF SHALL BE 30" MINIMUM ABOVE ROOF. MOUNTING OF DISCONNECTS DIRECTLY ON MECHANICAL EQUIPMENT IS NOT ACCEPTABLE. PROVIDE ANGLE IRON SUPPORT BRACKETS BOLTED TO ROOF FRAMING. FIELD GALVANIZE ALL FIELD CUT ENDS OF SUPPORTS. PROVIDE ROOF FLASHING AS REQUIRED.

18. PROVIDE ALL EQUIPMENT WITH ENCLOSURES LISTED OR LABELED FOR USE AND LOCATION WHERE SUCH EQUIPMENT IS INSTALLED.

19. PROVIDE UL LISTED FIRE STOP FOR ALL PENETRATIONS THROUGH FIRE RATED FLOORS, WALLS AND CEILINGS TO MAINTAIN ALL FIRE RATINGS. THE FIRE STOP MATERIALS SHALL BE RE-ENTERABLE AND REUSABLE.

20. GROUNDING SHALL BE EXECUTED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS, BOTH OF THE STATE OF CALIFORNIA AND LOCAL AUTHORITIES HAVING JURISDICTION.

21. PROVIDE GROUND WIRE IN EACH CONDUIT CONTAINING CIRCUITS FEEDING RECEPTACLES. THE CONDUIT SHALL NOT BE PERMITTED TO SERVE AS THE ONLY ELECTRICAL GROUND RETURN PATH.

22. PROVIDE HANDLE TIES AT CIRCUIT BREAKERS TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS OF MULTI-WIRE BRANCH CIRCUITS WITH A SHARED NEUTRAL.

23. UNLESS NOTED OTHERWISE ALL 120 VOLT HOMERUNS OVER 100 FEET SHALL BE #10 AWG MINIMUM, OVER 175 FEET SHALL BE #8 AWG MINIMUM. ADJUST CONDUIT SIZE ACCORDINGLY.

24. CONDUIT FOR TELEPHONE/DATA CABLING SHALL COMPLY WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:
   a. INSIDE BEND RADIUS SHALL BE AT LEAST 10 TIMES ITS INTERNAL DIAMETER.
   b. PROVIDE PULL BOXES WHENEVER CONDUIT LENGTH EXCEEDS 150 FEET AND WHEN COMBINED BENDS ARE GREATER THAN 180 DEGREES.
   c. ALL CONDUIT SHALL BE PROVIDED WITH INSULATED BUSHINGS.
   d. MAINTAIN A MINIMUM CLEARANCE OF 4 FEET FROM MOTORS AND TRANSFORMERS.
   e. MAINTAIN A MINIMUM CLEARANCE OF 12 INCHES FROM POWER CIRCUITS.
   f. MAINTAIN A MINIMUM CLEARANCE OF 12 INCHES FROM FLUORESCENT LIGHT FIXTURES.

25. COORDINATE LOCATION OF ALL CARD READERS, DOOR CONTACTS, ELECTRIC LOCKS AND ASSOCIATED CONDUIT REQUIREMENTS WITH SECURITY/BUILDING ACCESS CONTROLS INSTALLER.

26. COORDINATE MOUNTING HEIGHTS OF RECEPTACLES, SWITCHES, A/V DEVICES, SECURITY DEVICES, ETC. MOUNTED ON COMMON WALLS SO THAT ALL OUTLETS ARE MOUNTED TO ALIGN HORIZONTALLY.

27. NOTIFY THE ARCHITECT IN WRITING WHEN INSTALLATION IS COMPLETE AND THAT A FINAL INSPECTION OF THIS WORK CAN BE PERFORMED. IN THE EVENT DEFECTS OR DEFICIENCIES ARE FOUND DURING THIS FINAL INSPECTION, THEY SHALL BE CORRECTED TO THE SATISFACTION OF THE ARCHITECT BEFORE FINAL ACCEPTANCE CAN BE ISSUED.

28. ALL RECEPTACLES MOUNTED AT +5'-6" OR LOWER IN DWELLING UNITS SHALL BE TAMPER-RESISTANT TYPE, EXCEPT RECEPTACLES FOR FIXED APPLIANCES AND/OR EQUIPMENT. SEE SPECIFICATIONS SECTION 26 05 15.

29. PER 2016 NEC ARTICLE 210.12(A): ALL 120 VOLT, SINGLE PHASE, 15- AND 20- AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATIONS ROOMS,CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF THE CIRCUIT.

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SYMBOL LIST

(ALL SYMBOLS NOT NECESSARILY USED ON THESE DRAWINGS)
ALL SYMBOL DESCRIPTIONS ARE SUBJECT TO MODIFICATION AS NOTED ON THE DRAWINGS.
VERIFY EXACT LOCATIONS AND HEIGHTS OF OUTLETS WITH ARCHITECTURAL INTERIOR ELEVATIONS PRIOR TO ROUGH-IN.

NOTE:
REFER TO E-0.02 FOR LIGHTING FIXTURE SYMBOLS AND E-0.02A FOR LIGHTING CONTROLS.

- EXIT SIGN SINGLE FACE, ON FLUSH CEILING MOUNTED OUTLET BOX. ARROW INDICATES DIRECTIONAL ARROW ON EXIT SIGN FACE.
- EXIT SIGN DOUBLE FACE, ON FLUSH CEILING MOUNTED OUTLET BOX.
- (2,P / a,b) SINGLE POLE TOGGLE SWITCH, ON FLUSH WALL MOUNTED OUTLET BOX, +45". INSTALL MULTIPLE SWITCHES UNDER COMMON COVER PLATE. SUBSCRIPT OR SUPERSCRIPT AT SWITCH SYMBOL INDICATES THE FOLLOWING:
  2 - DOUBLE POLE 4 - FOUR WAY M - MANUAL MOTOR STARTERS
  3 - THREE WAY P - PILOT LIGHT K - KEY OPERATED
  R - SPDT MOMENTARY CONTACT RELAY SWITCH V - VAPOR PROOF
  a,b,c,d, ETC. - MULTIPLE SWITCHES WITH IDENTIFICATION OF OUTLET CONTROLLED.
- SWITCH FOR CONTROL OF LOW VOLTAGE LIGHTING RELAY(S), ON FLUSH WALL MOUNTED OUTLET BOX, +45". INSTALL MULTIPLE SWITCHES UNDER COMMON COVER PLATE.
- (OS) OCCUPANCY MOTION SENSOR ON FLUSH CEILING MOUNTED OUTLET BOX. REFER TO E-0.02A.
- (OS) OCCUPANCY MOTION/PHOTO SENSOR ON FLUSH CEILING MOUNTED OUTLET BOX. REFER TO E-0.02A.
- OCCUPANCY MOTION SENSOR SWITCH, ON FLUSH WALL MOUNTED OUTLET BOX, +45". REFER TO E-0.02A.
- (V) VACANCY SENSOR SWITCH, ON FLUSH WALL MOUNTED OUTLET BOX, +45". REFER TO E-0.02A.
- (L) LOW VOLTAGE LIGHTING SWITCH, ON FLUSH WALL MOUNTED OUTLET BOX, +45". REFER TO E-0.02A.
- DUPLEX CONVENIENCE RECEPTACLE VERTICAL ON FLUSH WALL MOUNTED OUTLET BOX, +18". STEM INDICATES WALL MOUNTED OUTLET BOX, TYPICAL.
- DUPLEX CONVENIENCE RECEPTACLE HORIZONTAL ON FLUSH WALL MOUNTED OUTLET BOX, +6" ABOVE COUNTER SPLASH.
- DUPLEX CONVENIENCE RECEPTACLE SPLIT WIRED, IMPRINTED "CONTROLLED", ON FLUSH WALL MOUNTED OUTLET BOX, +18".
- DUPLEX CONVENIENCE RECEPTACLE SPLIT WIRED, ON FLUSH WALL MOUNTED OUTLET BOX, +18".
- DOUBLE DUPLEX (FOUR-PLEX) CONVENIENCE RECEPTACLE ON ONE FLUSH WALL MOUNTED OUTLET BOX +18".
- DOUBLE DUPLEX (FOUR-PLEX) CONVENIENCE RECEPTACLE SPLIT-WIRED. ONE PLUG TO BE IMPRINTED "CONTROLLED", ON FLUSH WALL MOUNTED OUTLET BOX, +18".
- SINGLE RECEPTACLE, NEMA CONFIGURATION PER EQUIPMENT MANUFACTURER REQUIREMENTS, ON FLUSH WALL MOUNTED OUTLET BOX, +18".
- DUPLEX CONVENIENCE RECEPTACLE WITH INTEGRAL GROUND FAULT INTERRUPTER, VERTICAL ON FLUSH WALL MOUNTED OUTLET BOX +18".
- DUPLEX CONVENIENCE RECEPTACLE WITH INTEGRAL GROUND FAULT INTERRUPTER, HORIZONTAL ON FLUSH WALL MOUNTED OUTLET BOX, +6" ABOVE COUNTER SPLASH.
- (WP) DUPLEX CONVENIENCE RECEPTACLE IN DAMP LOCATION, WITH INTERNAL GROUND FAULT INTERRUPTER, IN FLUSH WALL MOUNTED OUTLET BOX WITH HINGED DOOR, LOCK AND KEY, +18".

  NOTE: RECEPTACLES LOCATED IN "WET LOCATIONS" SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF WHETHER OR NOT THE ATTACHMENT PLUG CAP IS INSERTED, PER CEC 406.9 (B)(1). PROVIDE P&S WIUCAST1 OR EQUAL BY HUBBELL.
- (WP) DUPLEX CONVENIENCE RECEPTACLE IN DAMP LOCATION, WITH INTERNAL GROUND FAULT INTERRUPTER, ON FLUSH WALL MOUNTED OUTLET BOX WITH SPRING DOOR COVER, +18".

  NOTE: RECEPTACLES LOCATED IN "WET LOCATIONS" SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF WHETHER OR NOT THE ATTACHMENT PLUG CAP IS INSERTED, PER CEC 406.9 (B)(1). PROVIDE P&S WIUCAST1 OR EQUAL BY HUBBELL.
- (CR) BUILDING ACCESS CONTROLS CARD READER. MOUNTED ON FLUSH WALL MOUNTED OUTLET BOX. REFER TO DETAIL B SHEET E4.01.
- (C) DOOR CONTACT. PROVIDE 3/4"C. FROM DOOR FRAME ROUTED TO IDCP IN DATA ROOM 106. REFER TO DETAIL B SHEET E4.01.
- DUPLEX CONVENIENCE RECEPTACLE ON FLUSH, FLOOR MOUNTED OUTLET BOX.
- **DUPLEX CONVENIENCE RECEPTACLES, TYPE ON FLUSH FLOOR MOUNTED OUTLET BOX.**
- **DUPLEX CONVENIENCE RECEPTACLE, ON FLUSH CEILING MOUNTED OUTLET BOX.**
- (J) **JUNCTION BOX, FLUSH WALL MOUNTED, +18".**
- (J) **JUNCTION BOX CONCEALED ABOVE ACCESSIBLE CEILING.**
- (J) **INDICATES CONNECTION TO EQUIPMENT AS REQUIRED, TYPICAL.**
- (TV) **JUNCTION BOX FOR TELEVISION, ON FLUSH WALL MOUNTED OUTLET BOX +18", OR AS NOTED.**
- (A / E-1) **PANELBOARD, ADJACENT LINE INDICATES PANEL FRONT. ADJACENT BALLOON INDICATES PANEL DESIGNATION "A", SEE DRAWING E-1 FOR PANEL SCHEDULE.**
- (A / E-1) **FLOOR STANDING SWITCHGEAR ADJACENT BALLOON INDICATES EQUIPMENT DESIGNATION "DBA", SEE DRAWING E-1 FOR SINGLE LINE DIAGRAM AND/OR SCHEDULE.**
- **CIRCUIT BREAKER STATIONARY (NON-DRAWOUT), SECONDARY VOLTAGE.**
- **FUSED SAFETY SWITCH (DISCONNECT), HORSE POWER RATED. MOUNT ON WALL +45", OR ON EQUIPMENT +36". PROVIDE SWITCH AND FUSES SIZED PER EQUIPMENT MANUFACTURER REQUIREMENTS.**
- **CONDUIT, INSTALLED CONCEALED IN WALL OR IN CEILING SPACE.**
- CONDUIT, INSTALLED CONCEALED IN OR UNDER FLOOR OR BELOW GRADE, 3/4" CONDUIT MINIMUM.
- CONDUIT, INSTALLED EXPOSED.
- (B-5,7,9) HOMERUN TO PANEL "B" FOR CIRCUITS 5, 7, 9 WITH SEPARATE NEUTRALS.
- UNDERGROUND CONDUIT STUBOUT, STUB 5'-0" FROM BUILDING OR WALKWAY, CAP, MARK AND RECORD.
- CONDUIT STUBOUT. CONDUIT QUANTITY & SIZE PER PLANS. CAP, MARK AND RECORD.
- CONNECTED TO SOLID GROUND REFERENCE POINT
- TERMINAL CABINET OR EQUIPMENT CABINET. ADJACENT LINE INDICATES CABINET FRONT.
- TELEPHONE OUTLET, ON FLUSH WALL MOUNTED OUTLET BOX, +18". PROVIDE 3/4"C.TO NEAREST TELEPHONE BACKBOARD OR AS NOTED. SUBSCRIPT OR SUPERSCRIPT AT SIGNAL SYMBOLS INDICATES THE FOLLOWING:
  C - OUTLET HORIZONTAL IN FLUSH WALL MOUNTED OUTLET BOX, +6" ABOVE COUNTER SPLASH.
  W - OUTLET ON FLUSH WALL MOUNTED OUTLET BOX, +45".
- (P) TELEPHONE OUTLET, ON FLUSH FLOOR MOUNTED OUTLET BOX. PROVIDE 3/4"C.TO NEAREST TELEPHONE BACKBOARD OR AS NOTED. "P" INDICATES PEDESTAL TYPE, ON FLUSH FLOOR MOUNTED OUTLET BOX.
- TELECOMMUNICATION OUTLET, ON FLUSH WALL MOUNTED OUTLET BOX +18", OR AS NOTED. PROVIDE 3/4"C.TO NEAREST TELEPHONE BACKBOARD OR AS NOTED.
- (SD) SINGLE STATION, CEILING MOUNTED COMBINATION CARBON MONOXIDE & PHOTO ELECTRIC SMOKE ALARM. 120 VOLT WITH BATTERY BACKUP WITH ALARM HORN, VISUAL INDICATORS AND VOICE WARNING "FIRE!FIRE!" AND "WARNING! CARBON MONOXIDE!" INTERCONNECT WITH ALL OTHER COMBINATION CO SMOKE ALARMS IN UNIT. KIDDE #KN-COPE-1 OR EQUAL.
- (C / E-2) DETAIL CALLOUT, "C" INDICATES DETAIL, "E-2" INDICATES DRAWING WHERE DETAIL OCCURS.
- (EF / 1) MECHANICAL EQUIPMENT CALLOUT. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATIONS AND REQUIREMENTS OF MECHANICAL EQUIPMENT.
- (1) NOTE CALLOUT. REFER TO CORRESPONDING NOTE ON DRAWING WHERE CALLOUT OCCURS.

ABBREVIATIONS

A.F.C.I.	ARC FAULT CIRCUIT INTERUPTER
A.F.F.	ABOVE FINISH FLOOR
A.F.G.	ABOVE FINISH GRADE
AWG	AMERICAN WIRE GAUGE
AMP, A	AMPERE
A.I.C.	AMPERES INTERRUPTING CAPACITY (SYMMETRICAL)
AF/AT	AMP FRAME, AMP TRIP
AS/AF	AMP SWITCH, AMP FUSE
CIRC.,CKT.	CIRCUIT
CB	CIRCUIT BREAKER
C	CONDUIT
C.O.	CONDUIT ONLY.
CONN	CONNECTED
CPT	CONTROL POWER TRANSFORMER
CLCB	CURRENT LIMITING CIRCUIT BREAKER
CLF	CURRENT LIMITING FUSE
CT	CURRENT TRANSFORMER
DIA	DIAMETER
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM
EMT	ELECTRICAL METALLIC TUBING
E-O-L	END-OF-LINE CIRCUIT TERMINATOR.
EF	EXHAUST FAN
FT or '	FEET
FA	FIRE ALARM
FLA	FULL LOAD AMPS
GFI	GROUND FAULT INTERRUPTER.
GRD	GROUND
HOA	HAND-OFF-AUTO
HVAC	HEATING, VENTILATION, AIR CONDITIONING
H.,W.,D.,L.	HEIGHT, WIDTH, DEPTH, LENGTH
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
IN. or "	INCHES
IG	ISOLATED GROUND
J-BOX	JUNCTION BOX
KVA	KILOVOLT AMPERES
KW	KILOWATT
LCL	LONG CONTINUOUS LOAD
L.F.	LINEAR FEET
LTG, LTS	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
MH	METAL HALIDE
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILS
MCP	MOTOR CIRCUIT PROTECTOR
MTD	MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NC	NORMALLY CLOSED
NO	NORMALLY OPENED
NF	NON-FUSED
NIC	NOT IN CONTRACT
NO. or #	NUMBER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED.
PRIMARY	OVER 600 VOLTS
PH. or Φ	PHASE
PROVIDE	FURNISH, INSTALL AND CONNECT.
PT	POTENTIAL TRANSFORMER
PA	PUBLIC ADDRESS
REC, RECEPT	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
SECONDARY	600 VOLTS AND LESS
TYP	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
V	VOLTS
VA	VOLT AMPERES
WP	WEATHERPROOF
W	WIRE
Y	WYE CONFIGURATION
Z1	ZONE, "1" INDICATES INITIATING ZONE #1.
△	DELTA CONFIGURATION
+45"	MOUNTING HEIGHT TO CENTER LINE OF COVER PLATE
1P	SINGLE POLE
2P	DOUBLE POLE

SHEET INDEX

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E-0.02B	LIGHTING FIXTURE CUT SHEETS
E-0.02C	LIGHTING FIXTURE CUT SHEETS
E-0.02D	LIGHTING FIXTURE CUT SHEETS
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E-3.02	ROOF ELECTRICAL PLAN
E-3.03	POOL BUILDING LIGHTING, POWER & SIGNAL PLANS
E-4.01	DETAILS AND ENLARGED ELECTRICAL PLANS

FIRE ALARM SYSTEM GENERAL NOTES

1. THE FIRE ALARM SYSTEM SHALL BE CODE MINIMUM REQUIREMENT AND SHALL BE DESIGN/BUILD BY THE CONTRACTOR.
2. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL SHOP DRAWINGS ARE SUBMITTED AND APPROVED BY THE LOCAL AUTHORITIES HAVING JURISDICTION (AHJ).
3. PROVIDE ALL DRAWINGS, ENGINEERING CALCULATIONS, EQUIPMENT SPECIFICATIONS, ETC. AS NECESSARY TO SUBMIT FOR REVIEW AND OBTAIN APPROVAL BY THE AHJ.
4. FIRE ALARM SHALL BE MONITORED BY A U.L. CERTIFICATED CENTRAL STATION MONITORING COMPANY.
5. PROVIDE WIRING INTEGRATION BETWEEN FIRE ALARM SYSTEM AND HVAC CONTROL SYSTEM. SEE MECHANICAL DRAWINGS FOR REQUIREMENTS.
6. FIRE ALARM SYSTEM SHALL MONITOR ALL FIRE SPRINKLER CONTROL VALVES, FLOW SWITCHES,AND PIV.
7. PROVIDE THE QUANTITY OF DEVICES REQUIRED FOR A COMPLETE AND OPERABLE FIRE ALARM SYSTEM TO MEET THE CITY OF GARDENA FIRE DEPARTMENT, AND STATE FIRE MARSHAL REQUIREMENTS.

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CITY OF GARDENA FREEWAY CITY INCORPORATED 1930

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REVISIONS

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B.M.: THE CITY OF GARDENA BENCHMARK NO. 5D-15 ELEV. = 43.508'

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING
SYMBOLS LIST & GENERAL NOTES
COMMUNITY AQUATICS & SENIOR CENTER
E-0.01

	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	BZ	05/25/2022

APPROVED BY:
DATE DIRECTOR OF PUBLIC WORKS

SHT. 123 OF 157 DWG. NO. 5-2606

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FIXTURE NOTES

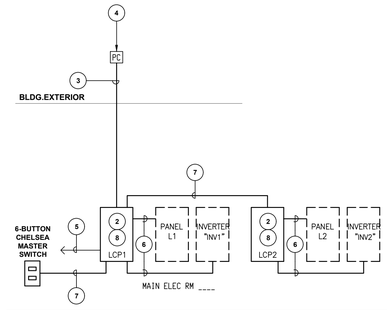
1. **IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ACTUAL CEILING CONSTRUCTION TYPE AS DEFINED ON THE ARCHITECTURAL DRAWINGS AND FURNISH ALL LIGHTING FIXTURES WITH THE CORRECT MOUNTING DEVICES WHETHER OR NOT SUCH VARIATIONS ARE INDICATED BY THE FIXTURE CATALOG NUMBER. THE CONTRACTOR SHALL VERIFY DEPTH OF ALL RECESSED LIGHTING FIXTURES WITH ARCHITECTURAL DRAWINGS PRIOR TO ORDERING FIXTURES. ANY DISCREPANCIES THAT WOULD CAUSE RECESSED FIXTURES NOT TO FIT INTO CEILING SHALL BE REPORTED TO THE ARCHITECT PRIOR TO ORDERING FIXTURES.**
2. **CEILING INSULATION SHALL BE INSTALLED TO ALLOW 3" MINIMUM CLEARANCE FROM SIDES AND TOP OF RECESSED LIGHT FIXTURES.**
3. **VERIFY MOUNTING HEIGHT OF ALL WALL AND PENDANT MOUNTED FIXTURES WITH ARCHITECT PRIOR TO ROUGH-IN.**
4. **REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHT FIXTURES.**
5. **DO NOT INSTALL LIGHTING FIXTURES IN MECHANICAL ROOMS UNTIL DUCTWORK AND PIPING IS LAID OUT. LOCATE LIGHTING FIXTURES TO AVOID ALL SUCH DUCTWORK AND PIPING TO PROVIDE OPTIMUM LIGHTING.**
6. **LAMPS FOR ALL FIXTURES, INCLUDING DECORATIVE FIXTURES, SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.**
7. **ADDITIONAL EXIT SIGNS AND EMERGENCY LIGHTING MAY BE REQUIRED AT FINAL. A PRELIMINARY WALK-THROUGH INSPECTION IS RECOMMENDED.**

Site Lighting Fixture Schedule

Symbol	Label	Area Utilized	Mounting	Manufacturer	Catalog Number	Description	Lamp	Lumens	Lumens Per Watt	Wattage
	S1	Pool deck & building exit doors.	Surface, wall, +8'-0" to bottom.	Lithonia	WEDG2-LED-P3-35K-80CRI-VW-MVOLT-SRM-AWS-DDBXD	LED wall mounted wedge fixture. Dark bronze finish.	LED	3200	142	23
	S2	Pool deck and site areas.	Palm tree ring, +12'-0". Coord. tree ring dia. with Landscape Architect. See detail 5/E4.01.	Hydrel Lighting	Aspen A-P2-80CRI-30K-12-55DEG-FLC Tree Ring: TRAR 6FX Transformer: TM100 277	LED low voltage "bullet" fixture mounted to palm tree via tree ring. (6) fixtures per tree ring, 3-up & 3-down. "U" on symbol denotes "UP" fixtures. Provide with remote 12V transformer.	LED MR16	923 ea.	77 ea	72 total
	S3	Site/pool deck walkway.	12' Pole on concrete base. See detail 6/E4.01.	Visionaire Lighting	PRE-2-M-T3-32LC-7-3K-UNV-PT-BZ POLE: RNTS-4R-11-12-9BC-343-TR3-BZ	LED pedestrian pole fixture on concrete pole base.	LED	7687	105	73
	S4	Stage shade structure.	+8'-0" on pole of structure.	Hevi-Lite	HL-360-WT-8LED-E-FL-12-LA-4 xfmr: HLT-DB-50	LED compact adjustable accent light. Machined aluminum. 1/2" NPS adjustable mounting stem. White finish. 3500K. Provide with 12v direct burial transformer.	LED	565	67	8.4

Interior Lighting Fixture Schedule

Symbol	Label	Area Utilized	Mounting	Manufacturer	Catalog Number	Description	Lamp	Lumens	Lumens Per Watt	Wattage
	F1	Offices	Recessed	Lithonia	2BLT4-48L-ADP-GZ1-LP835	LED recessed direct/indirect 2x4 fixture. 3500K	LED	4960	130.5	38
	F1A	classroom	Recessed	Lithonia	2BLT4-72L-ADP-GZ1-LP835	LED recessed direct/indirect 2x4 fixture. 3500K	LED	7245	119	59
	F2	Storage	Recessed	Lithonia	2GTL4-40L-RW-A19-GZ1-LP835	LED recessed prismatic 2x4 fixture. 3500K	LED	3922	131	30
	F3	Corridors/lockers/ restrooms.	Recessed	Lumenpulse	LCRS-A-FD-277-R-L20-35K-80-W-XX-SB-MWH-RD-XX-NA	LED recessed 4" aperture downlight. 3500K	LED	2313	116	20
	F4	Utility rooms	Pendant	Lithonia	2L1N-L48-5000LM-FST-MVOLT-35K-80CRI-WH-ZACVH	LED 48", pendant mounted, lensed strip light. 3500K	LED	4725	112.5	42
	F4A	Utility rooms	Surface	Lithonia	2L1N-L48-5000LM-FST-MVOLT-35K-80CRI-WH	LED 48", surface mounted, lensed strip light. 3500K	LED	4725	112.5	42
	F5	Locker rooms/restrooms & kitchen	Surface	Lithonia	LBL4-6000LM-80CRI-35K-MIN1-GZT-MVOLT	LED surface wrap 1x4 nominal. 3500K	LED	6101	123	50
	F6	Classroom	Pendant	3G Lighting	3G-2PLI-DI-L1000-L500-S80-35K-UNV-DIM-FL-WSO-WH-1C-S12	LED 12' linear direct-indirect pendant fixture. 2"W x 4"H. White finish, 3500K.	LED	18000	120	150
	F7	Pool equip./chemical rooms.	Surface	ILLUMINA	BS100LED-4-HT-MO-WT35-SM-EOS	LED surface mounted vapor tight 4' fixture. Corrosion resistant. Integral exterior occupancy sensor.	LED	6615	110	60
	F8	Lounge	Pendant	Delray Lighting	BG67-4-W-LO-W35-CR-D	LED Decorative pendant fixture. 48" dia.	LED	5040	74	68
	F9	Restroom vanity.	Surface, wall above mirror.	Lithonia	FMVTSL-36IN-MVOLT-30K-90CRI-BN	LED surface wall mounted vanity fixture.	LED	1919	73	26
	F10	Outdoor shower	Recessed	Indy	L6-17LM-35K-MVOLT-G4-80CRI-ZT-WPR-CSS-WET	LED recessed 6" aperture downlight. Wet Location. 3500K	LED	1462	92	16
	X1	Egress path	Surface, ceiling or wall per plans.	Lithonia	LE S-1-R-VR	LED exit sign with single face & mounting as shown on plans. provide directional chevrons as shown on plans. Provide vandal resistant shield.	LED	---	---	5
	X2	Egress path	Surface, ceiling or wall per plans.	Lithonia	LE S-2-R-VR	LED exit sign with single face & mounting as shown on plans. provide directional chevrons as shown on plans. Provide vandal resistant shield.	LED	---	---	5
	X1W	Egress path	Surface, ceiling or wall per plans.	Lithonia	WLTE-W-1-R-TP WET LOCATION LISTED	LED exit sign with single face & mounting as shown on plans. provide directional chevrons as shown on plans.	LED	---	---	5
	X2W	Egress path	Surface, ceiling or wall per plans.	Lithonia	WLTE-W-2-R-TP WET LOCATION LISTED	LED exit sign with double face & mounting as shown on plans. provide directional chevrons as shown on plans.	LED	---	---	5



LIGHTING CONTROL SINGLE LINE DIAGRAM NOTES

1. **3/4"C. WITH DATA CONDUCTORS AS REQUIRED.**
2. **PROGRAMMABLE LIGHTING CONTROL PANEL.**
3. **1/2"C. WITH CONDUCTORS AS REQUIRED.**
4. **OUTDOOR PHOTOCELL ON ROOF. MOUNT TO ROOF PER MANUFACTURERS RECOMMENDATIONS.**
5. **1/2"C.O. TO TELEPHONE BACKBOARD.**
6. **1"C. WITH CONDUCTORS AS REQUIRED.**
7. **CAT-5e-3/4"C.- 4 TWISTED PAIR.**
8. **nLIGHT ARP INTENC08 NLT 8SPR MVOLT 1VB SC SM DTC OR APPROVED EQUAL.**

TYPICAL LIGHTING CONTROL PANEL DETAIL

SCALE: NONE | 1

LIGHTING CONTROL PANEL "LCP1"

MOUNTING: SURFACE — PHOTOCELL: YES

PANEL	CIRCUIT	RELAY	DESCRIPTOIN	ZONE TYPE	NOTES
		1			
		2			
		3			
		4			
		5	SPARE		
		6	SPARE		
		7	SPARE		
		8	SPARE		

T/T TIMECLOCK ON/OFF
T/P TIMECLOCK ON/ PHOTOCELL OFF
P/T PHOTOCELL ON/TIMECLOCK OFF
P/P PHOTOCELL ON/PHOTOCELL OFF

LIGHTING CONTROL PANEL "LCP2"

MOUNTING: SURFACE — PHOTOCELL: YES

PANEL	CIRCUIT	RELAY	DESCRIPTOIN	ZONE TYPE	NOTES
		1			
		2			
		3			
		4			
		5	SPARE		
		6	SPARE		
		7	SPARE		
		8	SPARE		

T/T TIMECLOCK ON/OFF
T/P TIMECLOCK ON/ PHOTOCELL OFF
P/T PHOTOCELL ON/TIMECLOCK OFF
P/P PHOTOCELL ON/PHOTOCELL OFF

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fbaengr.com
FBA Job Number: 535050

REGISTERED PROFESSIONAL ENGINEER 10372 Exp. 09-30-22 ELECTRICAL STATE OF CALIFORNIA

CITY OF GARDENA INCORPORATED 1930

PREPARED BY:
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(949) 493-2600 phone

REGISTERED LANDSCAPE ARCHITECT — Signature — 05-25-2022 — Expiration Date — STATE OF CALIFORNIA

REVISIONS

NO.	DESCRIPTION	DATE	APPROVED

B.M.: THE CITY OF GARDENA BENCHMARK NO. SD-15 ELEV. = 43.508'

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING
LIGHTING FIXTURE SCHEDULE
COMMUNITY AQUATICS & SENIOR CENTER
E-0.02

	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	BZ	05/25/2022

APPROVED BY:
DATE — DIRECTOR OF PUBLIC WORKS
SHT. 124 OF 157 — DWG. NO.

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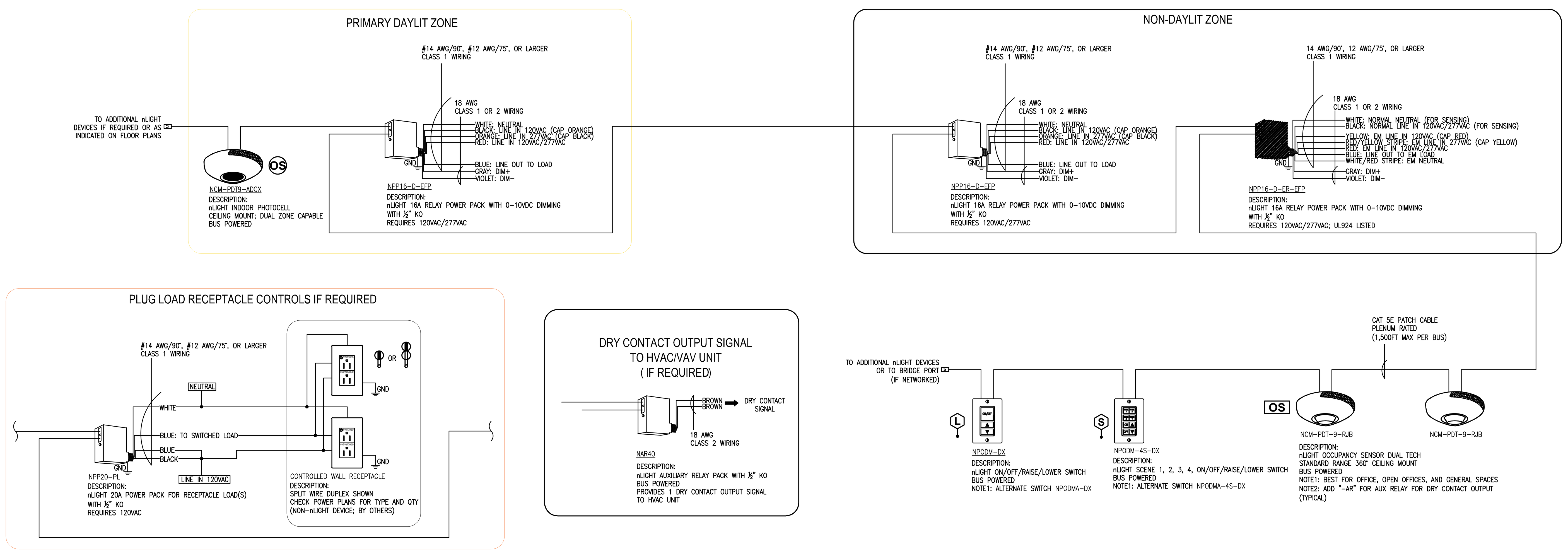
MULTIPLE ZONE SPACE W/ DAYLIGHTING & EM (INV/GEN)

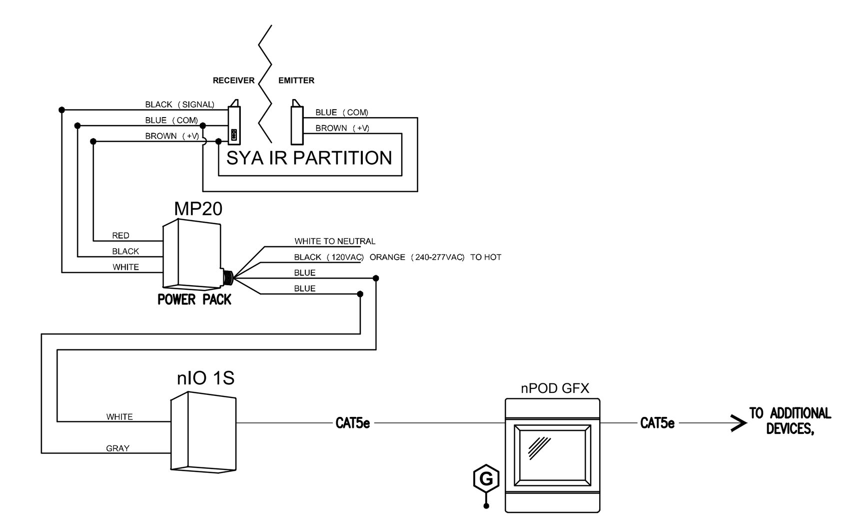


T24 COMPLIANT SEQUENCE OF OPERATION:

1. OCCUPANCY SENSOR PROVIDES AUTOMATIC ON/OFF OF LIGHTS/LOAD BASED ON ROOM OCCUPANCY (USE DEFAULT TIME DELAY FOR OCCUPANCY SENSOR).
2. DUAL ZONE PHOTOCELL SHALL AUTOMATICALLY REDUCE GENERAL LIGHTING IN BOTH PRIMARY AND SECONDARY DAYLIT ZONES BASED ON DAYLIGHT TO MAINTAIN DESIGN ILLUMINANCE.
3. SWITCH PROVIDES MANUAL OVERRIDE OF THE LIGHTS. NPODM-4S-DX PROVIDES 4 PRESET SCENES PLUS ALL ON/OFF/RAISE/LOWER SCENE SWITCH). NPOD-TOUCH PROVIDES 16 CHANNELS/ZONES FOR ON/OFF/RAISE/LOWER CONTROL AND 16 PRESET SCENES.
4. UPON LOSS OF NORMAL POWER, ALL "-ER" POWER PACK (S) SHALL SHUNT CLOSED AND KEEP 0-10VDC DIMMING AT HIGH END TRIM LEVEL.

nLIGHT SYSTEM NOTE:

1. OCCUPANCY SENSOR IS CAPABLE OF DOING PARTIAL ON 50%-70% LIGHTING POWER AND FULL AUTO OFF. PROVIDE IN SPACES WHERE REQUIRED SUCH AS CONFERENCE ROOMS, OFFICES < 250SQFT, MULTIPURPOSE ROOMS < 1000SQFT, AND CLASSROOMS.
2. OCCUPANCY SENSORS HAVE DRY CONTACT OUTPUT OPTION FOR HVAC SYSTEM; SPECIFY "-AR" OPTION ON OCCUPANCY SENSOR; REFER TO SPEC SHEET.

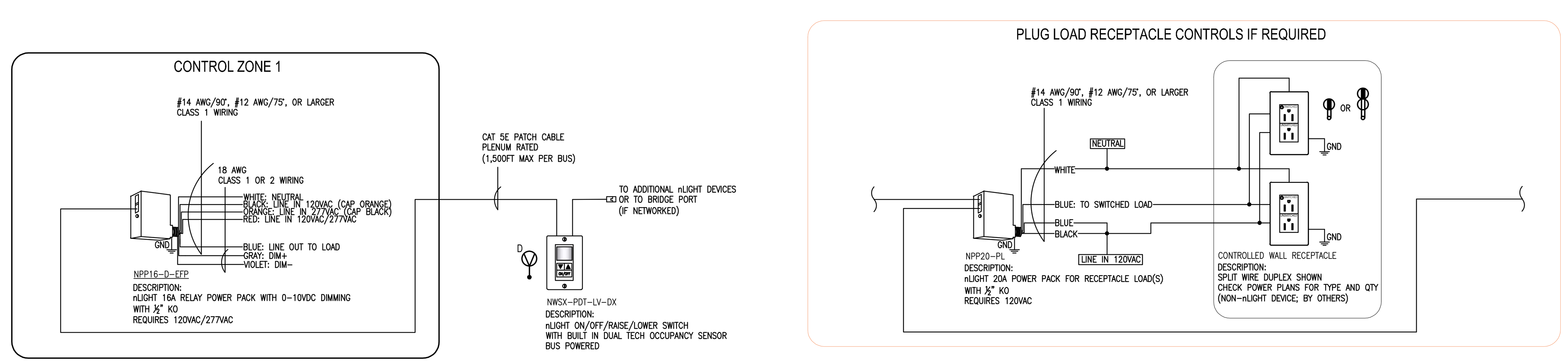


1 / – TYPICAL PARTITION CONTROL DETAIL

LIGHTING CONTROL GENERAL NOTES

1. THE TYPICAL CONTROL DIAGRAM IS AN EXAMPLE ONLY AND DEPICTS ONLY THE INTENT OF THE LIGHTING CONTROLS. LIGHTING CONTROL SYSTEM BASIS OF DESIGN IS AN nLIGHT SYSTEM BY ACUITY CONTROLS.
2. PROVIDE MANUFACTURER SPECIFIC INSTALLATION SHOP DRAWINGS. SHOP DRAWINGS SHALL INCLUDE 1/8 SCALE FLOOR PLANS INDICATING ALL REQUIRED CONTROL DEVICE LOCATIONS AND POINT-TO-POINT WIRING. SHOP DRAWINGS SHALL INCLUDE PRODUCT DATA CUT SHEETS AND SINGLE LINE SCHEMATIC DIAGRAM.
3. WHETHER OR NOT DETAILED ON ELECTRICAL DRAWINGS, PROVIDE ALL CONTROL DEVICES AS REQUIRED FOR A COMPLETE, FULLY OPERABLE AND CODE COMPLIANT SYSTEM.
4. PROVIDE UL924 DEVICES IN ANY AREA THAT REQUIRES EMERGENCY EGRESS LIGHTING WHETHER OR NOT SPECIFICALLY HEREIN DETAILED. REFER TO LIGHTING PLANS FOR ALL EMERGENCY EGRESS "EM" LIGHTING FIXTURES.
5. PROVIDE CONTROL DEVICES AS REQUIRED FOR LIGHTING ZONES AS SHOWN ON LIGHTING PLANS. SCHEMATIC DIAGRAM EXAMPLES SHOWN HEREIN ARE NOT SPECIFIC FOR EACH LIGHTING CONTROL CONDITION DEPICTED ON LIGHTING PLANS.
6. ALL 0-10VDC DIMMING CONDUCTORS SHALL BE INSTALLED IN CONDUIT.
7. VERIFY CORRECT LIGHTING CONTROL CONFIGURATIONS AND OPERATION IN EACH ROOM. REFER TO LIGHTING PLANS.
8. SIMULATE NORMAL SOURCE POWER FAILURE BY "OPENING" (TURN OFF) BUILDING MAIN SERVICE DISCONNECT AND VERIFY CONNECTIONS AND OPERATION OF UL 924 DEVICES FOR EMERGENCY LIGHTING FIXTURES.
9. SETUP, PROGRAM, AND FUNCTION TEST LIGHTING CONTROL SYSTEMS TO PERFORM EACH OF THE INDICATED CONTROL FUNCTIONS.
10. REMOTE LED DRIVERS AND/OR LIGHTING CONTROL RELAYS/RELAY PANELS SHALL BE MOUNTED IN NEAREST ACCESSIBLE CEILING SPACE AND/OR UTILITY ROOM CEILING SPACE. WHERE THIS IS NOT POSSIBLE, AND A CEILING ACCESS PANEL IS REQUIRED, THE LOCATION OF THE ACCESS PANEL SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION.

1-ZONE SMALL ROOM



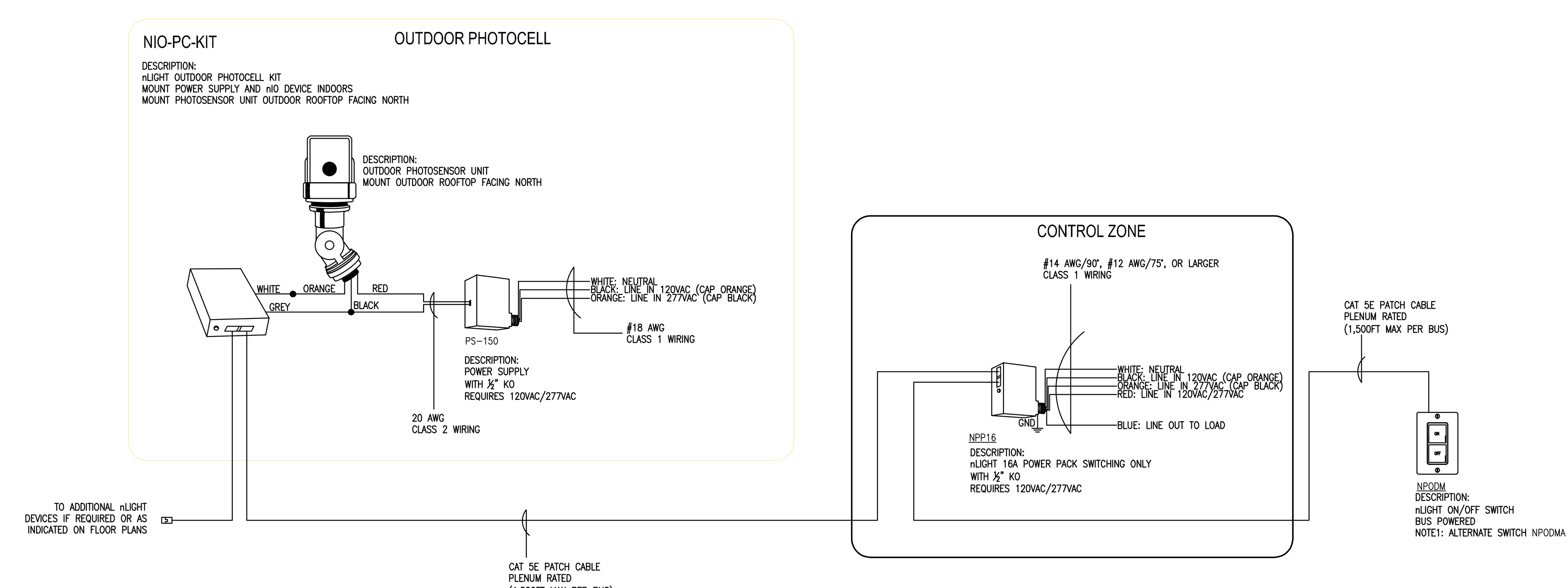
TITLE 24 COMPLIANT SEQUENCE OF OPERATION:

1. OCCUPANCY SENSOR PROVIDES AUTOMATIC ON/OFF OF LIGHTS/LOAD BASED ON ROOM OCCUPANCY (USE DEFAULT TIME DELAY FOR OCCUPANCY SENSOR).
2. SWITCH PROVIDES MANUAL OVERRIDE OF THE LIGHTS: ON/OFF/RAISE/LOWER.

nLIGHT SYSTEM NOTE:

1. OCCUPANCY SENSOR IS CAPABLE OF DOING PARTIAL ON 50%-70% LIGHTING POWER AND FULL AUTO OFF. PROVIDE IN SPACES WHERE REQUIRED SUCH AS CONFERENCE ROOMS, OFFICES < 250SQFT, MULTIPURPOSE ROOMS < 1000SQFT, AND CLASSROOMS.

EXTERIOR LIGHTS W/ FEW ZONES



T24 COMPLIANT SEQUENCE OF OPERATION:

1. PHOTOCELL OR ASTRONOMICAL TIME-SWITCH CONTROL SHALL AUTOMATICALLY SHUT-OFF EXTERIOR LIGHTING WHEN DAYLIGHT IS AVAILABLE.
2. AUTOMATIC SCHEDULING CONTROLS VIA TIME CLOCK AT NLIGHT ECLYPSE CONTROLLER (NECY) SHALL REDUCE LIGHTING POWER BY 50%-90% AND FULL OFF DURING UNOCCUPIED TIMES.
3. AUTOMATIC SCHEDULING CONTROLS VIA TIME CLOCK AT NLIGHT ECLYPSE CONTROLLER (NECY) SHALL ALLOW SCHEDULING OF A MINIMUM OF TWO NIGHTTIME PERIODS AT DIFFERENT LIGHTING LEVELS.
4. SYSTEM MAY INCLUDE AN OVERRIDE FUNCTION WALL SWITCH THAT TURNS LIGHT ON FOR 2 HOURS MAX DURING DIMMED OR OFF STATE.

nLIGHT SYSTEM NOTE:

1. EXTERIOR LIGHTING SHALL COMPLY WITH T24 2019 PART 6 SECTION 130.2c3 MOTION SENSOR CONTROLS NOT SHOWN IN THIS DIAGRAM.

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fbaengr.com
FBA Job Number: 535050

REGISTERED PROFESSIONAL ENGINEER STEVEN R. ... No. E 10372 Exp. 09-30-22 ELECTRICAL STATE OF CALIFORNIA

CITY OF GARDENA FREEWAY CITY INCORPORATED 1930

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LICENSED LANDSCAPE ARCHITECT LARRY P. RYAN LICENSE NO. 2502 STATE OF CALIFORNIA
Signature
09/30/2023 Renewal Date
9/29/2022 Date

REVISIONS

NO.	DESCRIPTION	DATE	APPROVED

B.M.: THE CITY OF GARDENA BENCHMARK NO. 5D-15 ELEV. = 43.508'

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING
LIGHTING CONTROLS
COMMUNITY AQUATICS & SENIOR CENTER
E-0.02A

	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	BZ	05/25/2022

APPROVED BY:
DATE — DIRECTOR OF PUBLIC WORKS
SHT. 125 OF 157 DWG. NO.

FILE PATH: I:\535\050\E-0.02_535050.DWG, PLOT TIME: 9/29/2022 8:24:15 AM
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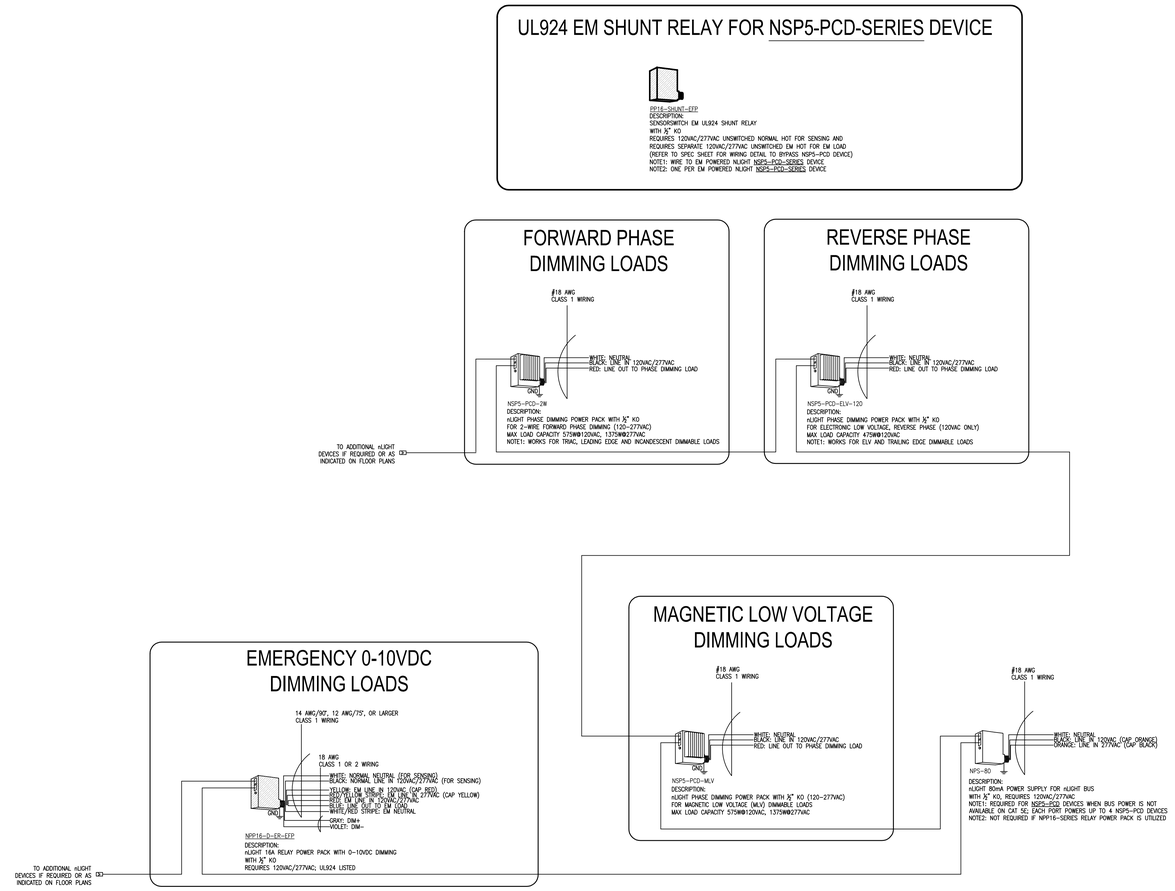

GENERAL SYSTEM NOTES:

ON DIGITAL SYSTEMS, ALL DEVICES TO BE CONNECTED IN A DAISY CHAIN PATTERN SO THAT THE FIRST AND LAST DEVICE IN THE CHAIN HAS AN OPEN PORT. NO T-TAP CONNECTIONS. EXCEPTIONS FOR NLIGHT "RJB" DEVICES UTILIZING THEIR INCLUDED RJ45 SPLITTER INSIDE PACKAGING.

ON DIGITAL SYSTEMS, CONTRACTOR SHALL NOTE AND LABEL ADDRESS AND LOCATION OF EACH DEVICE ON THE SYSTEM ONE-LINE DIAGRAMS OR SYSTEM LAYOUT DRAWINGS AT TIME OF INSTALLATION.

WIRING SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE (NEC) AND APPLICABLE LOCAL CODES, INCLUDING PROVISION OF EQUIPMENT GROUNDING AS REQUIRED BY THE NEC.

POWER CONDUCTORS SHALL BE SIZED PER THE NEC AMPACITY TABLES (ARTICLE 310), INCLUDING ADJUSTMENT FACTOR AND NEUTRAL CONDUCTOR REQUIREMENTS (FEED AND BRANCH NEUTRAL CONDUCTORS MUST BE COUNTED AS CURRENT CARRYING CONDUCTORS). RUN SEPARATE NEUTRAL CONDUCTORS FOR EACH DIMMED LOAD CIRCUIT.

FOR 0-10VDC DIMMING SYSTEMS, VIOLET AND GRAY CONDUCTORS ARE FOR 0-10VDC LOW VOLTAGE TERMINATIONS ONLY. NEVER TERMINATE LINE VOLTAGE (120/230/277VAC) TO VIOLET AND GRAY.

CONTRACTOR IS RESPONSIBLE FOR ALL CONTROL TERMINATIONS. NO SPLICES ARE PERMITTED IN CONTROL WIRING.

POWER AND CONTROL CONDUCTORS MUST NOT SHARE THE SAME RACEWAY OR CONDUIT EXCEPT WHERE ALLOWED.

LIGHTING CONTROL EQUIPMENT MUST BE INSTALLED, MAINTAINED, AND OPERATED IN AN "OFFICE CLEAN" DRY ENVIRONMENT, INDOOR DRY LOCATIONS ONLY, 10% - 90% RELATIVE HUMIDITY; AMBIENT TEMPERATURE 0°- 40°C (32°- 104°F) - 0°- 35°C (32°- 95°F) RECOMMENDED.

SENSORS IN ELECTRICAL/MECHANICAL LOCATIONS NEED TO BE VERIFIED WITH AUTHORITY HAVING JURISDICTION. REFER TO NEC 110.26.D.

RELAY AND DIMMER PANEL SCHEDULES SHALL CONTAIN BREAKER PANEL INPUTS AS WELL AS ZONES/AREAS CONTROLLED.

VERIFY MAXIMUM CABLE LENGTHS BASED ON CONTROL SYSTEM. MANUFACTURER IS NOT RESPONSIBLE FOR SYSTEMS EXCEEDING CABLING PARAMETERS.

LOW VOLTAGE CABLE MUST BE INSTALLED AT LEAST 12 INCHES FROM ALL LINE VOLTAGE CONDUCTORS EXCEPT TO CROSS OR MAKE TERMINATIONS. CAT. 5 CABLE MUST BE KEPT AWAY FROM ALL EMF DEVICES SUCH AS BALLASTS OR TRANSFORMERS.

CONTRACTOR/INSTALLER TO VERIFY WITH THE MANUFACTURER TYPE AND QUANTITY OF OCCUPANCY SENSORS TO ENSURE 100% COVERAGE OF THE SPACE(S) WHERE SHOWN CONTROLLED BY OCCUPANCY SENSOR(S).

ONSITE SYSTEM STARTUP, PROGRAMMING AND END USER TRAINING SHALL BE PERFORMED BY FACTORY AUTHORIZED TECHICIAN/REPRESENTATIVE. CONTRACTOR SHALL INCLUDE THIS SERVICE LINE ITEM IN THEIR BID PACKAGE.

IMPORTANT: **MANUFACTURER OR AUTHORIZED LIGHTING REPRESENTATIVE OF CONTROL SYSTEM MUST VERIFY TYPE, QUANTITIES, PLACEMENT OF DEVICES TO MEET DESIGN INTENT AND TITLE 24 CODE COMPLIANCE, AND PROVIDE SHOP DRAWINGS FOR SPECIFIER APPROVAL. THIRD PARTY TAKE-OFFS OR LAYOUTS WILL NOT BE ACCEPTED. NO EXCEPTIONS.**

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FBA Job Number 535050

REGISTERED PROFESSIONAL ENGINEER 10372 Exp. 09-30-22 ELECTRICAL STATE OF CALIFORNIA

CITY OF GARDENA HIGHWAY CITY INCORPORATED 1930

PREPARED BY:
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(949) 493-2600 phone

REGISTERED LANDSCAPE ARCHITECT CHRISTOPHER A. JOHNSON 5011 STATE OF CALIFORNIA
SIGNATURE
05-25-2022
DATE
5-25-2022
REN. DATE

REVISIONS

NO.	DESCRIPTION	DATE	APPROVED

B.M.: THE CITY OF GARDENA BENCHMARK NO. SD-15
ELEV. = 43.508'

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING

LIGHTING CONTROLS

COMMUNITY AQUATICS & SENIOR CENTER
E-0.02B

	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	BZ	05/25/2022

APPROVED BY:
DATE DIRECTOR OF PUBLIC WORKS
SHT. 126 OF 157 DWG. NO.

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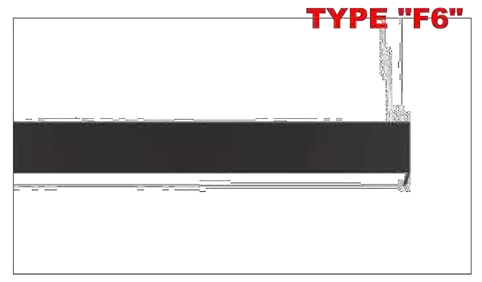
FBA Engineering / Plot Date: 9/29/2022 8:24 AM / Plotted by: Steve Roth / Drawing Location: I:\535\050\E-0.02_535050.dwg

PLOT DATE: 1/20/2022 8:24:15 AM, JAMES.DWG
PLOT BY: AMY LEE

TYPE "F6"

3G LIGHTING

3G-2PLI-DI
2" LINEAR PENDANT
DIRECT/INDIRECT



- Narrow 2" aperture with one piece extruded aluminum housing
- Individual or continuous runs available in multiple run configurations
- Direct/Indirect distribution with multiple lumen output options
- LED system with performance up to 140 lumens per watt
- Extruded acrylic lens available in flush, 1" and 2" drop lens options
- Widespread and asymmetric optics available
- 1% dimming standard with several driver options

ORDERING INFORMATION

PROJECT: | TYPE:
CATALOG #: | DATE:

CAT. NO	LUMEN OUTPUT (DIRECT)	LUMEN OUTPUT (INDIRECT)	CRI	COLOR TEMP
3G-2PLI-DI	L250 - LOW OUTPUT (250 LM/FT)[1] L500 - MEDIUM OUTPUT (500 LM/FT) L750 - HIGH OUTPUT (750 LM/FT) L1000 - VERY HIGH OUTPUT (1000 LM/FT)[2] LC___ - CUSTOM OUTPUT (SPECIFY LM/FT)* *Specify custom lumen outputs in 50lm increments (ie: LC600, LC650, LC700) Custom output cannot exceed LC1000	L250 - LOW OUTPUT (250 LM/FT)[1] L500 - MEDIUM OUTPUT (500 LM/FT) L750 - HIGH OUTPUT (750 LM/FT) L1000 - VERY HIGH OUTPUT (1000 LM/FT)[2,3] LC___ - CUSTOM OUTPUT (SPECIFY LM/FT)* *Specify custom lumen outputs in 50lm increments (ie: LC600, LC650, LC700) Custom output cannot exceed LC1000	S80 - 83+ CRI (STANDARD) H90 - 93+ CRI	27K - 2700K 30K - 3000K 35K - 3500K 40K - 4000K

VOLTAGE	DRIVER	LENS OPTION (DIRECT)	LENS OPTION (INDIRECT)	FINISH
UNV - 120-277V 347 - 347V (0-10V ONLY)	DIM - 0-10V (STANDARD - 100-1%) DHL2 - LUTRON HI-LUME LDE1 (100-1% ECOSYSTEM) DALI - DALI (100-1%)[4] D01 - 0-10V (100-0.1%)	FL - FLUSH DD1 - 1" DROP LENS DD2 - 2" DROP LENS DASY - ASYMMETRIC OPTIC	FL - FLUSH WSO - WIDESPREAD OPTIC ASY - ASYMMETRIC OPTIC	WH - WHITE (STANDARD) SV - SILVER BK - BLACK All mounting canopies provided in white as standard

CABLE LENGTH	CIRCUITING	OPTIONS	LENGTH (FEET)
60 - 60" 120 - 120"	1C - 1 CIRCUIT 2C - 2 CIRCUIT	EMB - INTEGRAL EMERGENCY BATTERY (4' SECTION ONLY) EMC - EMERGENCY CIRCUIT	S - 12' (STRAIGHT RUN)* L - ___'X___' (L-SHAPE) U - ___'X___'X___' (U-SHAPE) R - ___'X___' (RECTANGLE/SQUARE) T - ___'X___' (T-SHAPE) X - ___'X___' (X-SHAPE) CUS - ___ (CUSTOM LAYOUT - PROVIDE DRAWING) *Individual units available in 2', 3', 4', 5', 6', and 8' Continuous runs available in 1' increments as standard

1 L250 (250LM/FT) not available in 2' and 3' lengths (Please specify LC400 for 2' and 3' fixture length when outputs lower than 500LM/FT are required)
2 L1000 (1000LM/FT) not available with H90 (93+ CRI)
3 L1000 (1000LM/FT) not available with ASY (Indirect Asymmetric optic)
4 DALI-2 (Type 6) provided as standard. Please consult factory for DALI (Type 8) options

OCTOBER 5, 2020

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3G reserves the right to change, without notice, specifications or materials for product improvement.

5 YEAR LIMITED WARRANTY

TYPE "F4"

LITHONIA LIGHTING®

Catalog Number
Notes
Type

LED Striplight

ZL1N

24", 48" and 96" Lengths

FEATURES & SPECIFICATIONS

INTENDED USE — Built on the compact, low-profile Z strip channel, this LED strip offers long maintenance-free life, several color temperatures, lumen outputs and lengths. Ideal for new construction and retrofit applications in T5 and T8 lengths. Ideal for uplight and downlight in commercial, retail, manufacturing, warehouse, cove and display applications. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.

CONSTRUCTION — Compact-design channel and cover are formed from code-gauge cold-rolled steel. Easy to install row aligner included for continuous row mounting.

Finish: Paint options include high-gloss, baked white enamel (WH), galvanized (GALV), matte black (MB) and smoke gray (SKGY). After fabrication, five-stage iron phosphate pre-treatment ensures superior paint adhesion and rust resistance.

OPTICS — Standard diffuse snap on/snap off lens eliminates pixels, improves uniformity and minimizes glare. L/LENS option available.

ELECTRICAL — L70>60,000hours. Utilizes high-output LEDs integrated on a two-layer circuit board, ensuring cool-running operation. Optional internal pluggable wiring harness for reduced labor cost in row mounting applications. (See PLR_ ordering information on page 2.) Electronic LED driver is rated for 75 input watts maximum (see Operational Data on page 4 for actual wattage consumption), **multi-volt input and 0-10V dimming standard.** This fixture is designed to withstand a maximum line surge of 2.5kV at 0.75kA combination wave for indoor locations, for applications requiring higher level of protection additional surge protection must be provided.

LEDs provide nominal 80 CRI at 3000 K, 3500 K,4000 K, or 5000 K.

Lumen output up to 2,000 lumens per foot. In 86°F (30°C) ambient environments. Luminaire should be installed in applications where ambient temperatures do not exceed 86°F (30°C).

INSTALLATION — Tool-less channel cover for easy installation.

Fixture may be surface mounted (with or without ZSPRG hanger), pendant or stem mounted with appropriate mounting options. Three-point aligner locks in place for easy continuous row mounting.

LISTINGS — CSA certified to US and Canadian safety standards. For use in damp locations between -40°F (-40°C) and 86°F (30°C).

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

BUY AMERICAN — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

Buy American

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks marked by a shaded background*

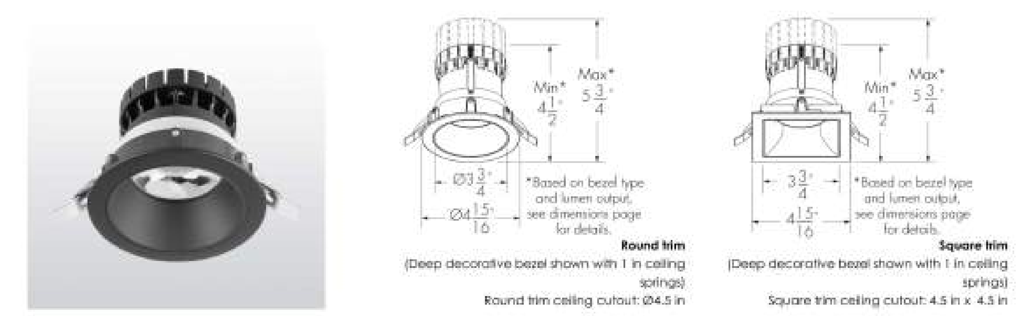
To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

Specification Sheet

TYPE "F3" downlights - lumencore
Small Downlight
LCRS

Project Name ______ Qty ______
Type ______ Catalog / Part Number ______



Photometric Summary

Based on Narrow Optic (nominal 25°), 4000K, CRI 80+

Nominal output (lm)	Delivered output (lm)[1]	Insulated ceiling Power (120V) (W)	Insulated ceiling Efficacy (lm/W)	Non-insulated ceiling Power (120V) (W)	Non-insulated ceiling Efficacy (lm/W)
700	828	6.5	127	8.5	97
1000	1,070	8	134	10	107
1300	1,484	11	135	13	114
2000	2,313	18	129	20	116

(1) Consult website for latest IES files.

Optics

RN - 5° | VN - 10° | NS/NSR/NSFR - 15° | N/NR/NFR - 25° | N/WFR - 40° | W/WFR - 60° | VW/VWFR - 80°

Colors and Color Temperatures

2200K | 2700K | 3000K | 3500K | 4000K
DTW | DTWP | DWH | DWW | DWWP

Controls

ON/OFF | 0-10V | PRO 0-10V | PH | PRO PH | PRO DALI
LUTRON | vive | nLight | DALI | DALITB | eDMXrdm | lumen

Certifications

Description

The Lumencore Small is a high-performance LED downlight for ceiling applications. Available in an array of trims and finishes, outputs (up to 4000lm), optics, color renderings, accessories, and a WET IP54 option, these luminaires are here to outperform. The Lumencore Small possesses a previously unseen lifespan, is quick to install, and can be used with a number of different control options.

Features

Output (nominal lumens)	700 lm, 1000 lm, 1300 lm, 2000 lm, 3000 lm, 4000 lm
Options	Emergency battery backup with hanger bar (Bodine BSL17C-C2), Emergency battery backup with hanger bar (Iota ILB-CP07-A TBTS), IP54 rating suitable for wet locations. For IP55 Shower Rated "Dead Front" applications see Lumencore Small Shower Rated specification sheet
Warranty	5-year limited warranty

Electrical and control

Wattage range	8.5W to 42W (wattage will vary based on voltage, output, color temperature, color rendering, optic, control and installation type, refer to Power Consumption table for details)

Physical

Trim	Round, Square trim with round hole, Trimless round, Square, Trimless square
Ceiling Thickness	0.04 in to 1 in ceiling thickness, 1.05 in to 2 in ceiling thickness
TIR Optics Material	Clear polycarbonate
Weight	3.4 lbs with RM installation type, 4.75 lbs with NC installation type, 10.8 lbs with PC, IC, IC/AT and RMR installation types (weights are approximate based on the heaviest fixture configuration), please consult factory if exact fixture weight is needed

lumenpulse
1220 Marie-Victorin Blvd., Longueuil, QC, J4G 2H9, CA | T United States 617.307.5700 | Canada 1.877.937.3003 | 514.937.3003 | F 514.937.6289
info@lumenpulse.com | www.lumenpulse.com | www.lumenpulse.com/products/1984

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EM - R11

TYPE "F1"

LITHONIA LIGHTING®

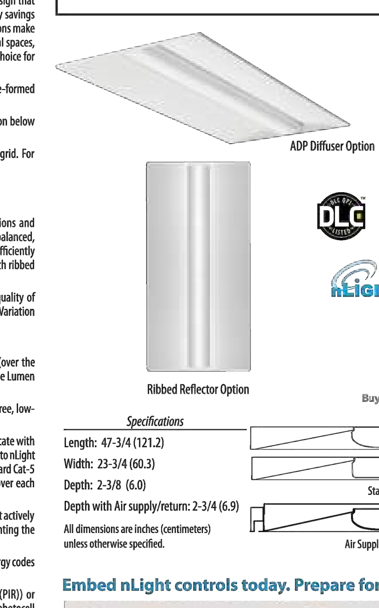
Catalog Number
Notes
Type

DIGITAL NAVIGATION
Ordering Tree | nLight Platform | Sensor Switch JOT | Photometrics | Performance Data

BLT Series LED

2BLT4

2' x 4' LED



Specifications
Length: 47-3/4 (121.2)
Width: 23-3/4 (60.3)
Depth: 2-3/8 (6.0)
Depth with Air supply/return: 2-3/4 (6.9)
All dimensions are inches (centimeters) unless otherwise specified.

Static
Air Supply/Return

FEATURES & SPECIFICATIONS

INTENDED USE — The BLT Best-in-Value Low Profile LED luminaire features a popular center basket design that offers a clean, versatile style and volumetric distribution. High efficacy LED light engines deliver energy savings and low maintenance compared to traditional sources. An extensive selection of configurations and options make the BLT the perfect choice for many lighting applications including schools, offices and other commercial spaces, retail, hospitals and healthcare facilities. The low profile BLT design (2-3/8") also makes it an excellent choice for renovation projects.

CONSTRUCTION — Prior to fabrication, BLT components are coated with a proprietary paint blend and die-formed for dimensional consistency.

The BLT reflector is available in both smooth and ribbed finishes. Choose RB from the fixture style section below for a ribbed finish.

End plates contain easy-to-position integral T-bar clips for securely attaching the luminaire to the T-grid. For additional T-grid security, optional screw on T-bar clips are available.

Diffusers are extruded from impact modified acrylic for increased durability.

LED boards and drivers are accessible from the plenum.

OPTICS — Volumetric illumination is achieved by creating an optimal mix of light to walls, partitions and vertical and horizontal work surfaces – rendering the interior space, objects and occupants in a more balanced, complimentary luminous environment. High performance extruded acrylic diffusers conceal LEDs and efficiently deliver light in a volumetric distribution. Four diffuser choices available - curved and square designs with ribbed or a smooth frosted finish.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior quantity and quality of illumination for extended service life. 80% LED lumen maintenance at 60,000 hours (L80/60,000). Color Variation within 3-step MacAdam ellipse (3SDCM).

Non-Configurable BLT: Generic 0-10 volt dimming driver. Dims to 10%

Configurable BLT: available in High Efficiency (HE) versions for applications where a lower wattage (over the standard product) is required. The High Efficiency versions deliver >130 LPW and can be specified via the Lumen Package designations in the Ordering Information below.

eldoLED driver options deliver choice of dimming range, and choices for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI.

Optional integrated nLight®controls make each luminaire addressable - allowing it to digitally communicate with other nLight enabled controls such as dimmers, switches, occupancy sensors and photocontrols. Connection to nLight is simple. It can be accomplished with integrated nLight AIR wireless RIO, RES7 sensors, or through standard Cat-5 cabling. nLight offers unique plug-and-play convenience as devices and luminaires automatically discover each other and self-commission. nLight AIR is commissioned easily through an intutitive mobile app.

Lumen Management: Unique lumen management system (option N80) provides on board intelligence that actively manages the LED light source so that constant lumen output is maintained over the system life, preventing the energy waste created by the traditional practice of over-lighting.

Step-level dimming option allows system to be switched to 50% power for compliance with common energy codes while maintaining fixture appearance.

SENSOR— Integrated sensor (individual control): Sensor Switch MSD7ADCX ((Passive infrared (PIR)) or MSDPDT7ADCX ((PIR/Microphonics Dual Tech (PDT)) integrated occupancy sensor/automatic dimming photocell allows the luminaire to power off when the space is unoccupied or enough ambient light is entering the space. See page 4 for more details on the integrated sensor.

Integrated Sensor (nLight Wired Networking): This sensor is nLight-enabled, meaning it has the ability to communicate over an nLight network. When wired, using CAT-5 cabling, with other nLight-enabled sensors, power packs, or WallPods, an nLight control zone is created. Once linked to a Gateway, directly or via a Bridge, the zone becomes capable of remote status monitoring and control via SensorView software. See page 4 for the nLight sensor options.

Integrated Smart Sensor (nLight Air Wireless Platform): The RES7 sensor is nLight AIR enabled, meaning it has the ability to communicate over the wireless nLight control platform. It is available with an automatic dimming photocell, and either a digital PIR or a microphonics (PDT) dual technology occupancy sensor. It pairs to other luminaires and wall switches through our mobile app, CLAIRITY, which allows for simple sensor adjustment. See page 4 for more details on the Integrated Smart Sensor.

Integrated Wireless Sensor (single room control): Sensor Switch VERTEX JOT or JOTVTX15 luminaire-embedded occupancy and ambient light sensor allows the luminaire to power off when the space is unoccupied or when enough ambient light is entering the space. See page X for more details on the integrated wireless sensor.

INSTALLATION — The BLT's low profile design of only 2-3/8" provides increased installation flexibility especially in restrictive plenum applications. The BLT fits into standard 15/16" and narrow 9/16" T-grid ceiling systems.

Suitable for damp location.

For recessed mounting in hard ceiling applications, Drywall Grid Adapters (DGA) are available as an accessory. See Accessories section.

LISTINGS — CSA Certified to meet U.S. and Canadian standards. IC rated. Tested in accordance with ISO 14644-1; suitable for ISO Class 5-9 positive and negative pressure clean rooms.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

BUY AMERICAN — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT.
Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/support/warranty/terms-and-conditions

NOTE: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

Embed nLight controls today. Prepare for tomorrow.

Now	Tomorrow
User-friendly install	Scalability
Enhanced energy savings	Space configuration
Code compliance	Future ready

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a shaded background*
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

TYPE "F7"

Type: ______
Project: ______

ILLUMINA®

LED | WET | IP66 | IK05 LOGICA SANITATION TITLE 20 TITLE 24 BAA / ARRA RoHS

BS100LED

- The ILLUMINA® BS100LED is corrosion, flame and vandal resistant.
- HOUSING: 100% UV stabalized polycarbonate, liquid silicone perimeter gasket with memory retention.
- DIFFUSER: Frosted UV stabilized polycarbonate diffuser, providing even light distribution.
- LUMENS:

2FT	4FT
LO: 3585 up to 3796 lm **MO:** 4780 up to 5062 lm **HO:** 5975 up to 6327 lm	**VLO:** 3954 up to 4187 lm **LO:** 5512 up to 5837 lm **MO:** 6615 up to 7004 lm **HO:** 8366 up to 8857 lm

- OPERATING TEMP:
  HT (AC Only) -40°F to 104°F (-40°C to 40°C)
  SA (AC & Emergency) 32°F to 104°F(0°C to 40°C)
- WEIGHT: **2FT:** 5 lbs. / 2.2 kg. / **4FT:** 10 lbs. / 4.5 kg

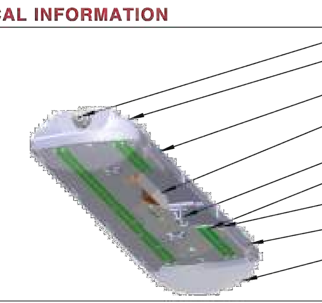
APPLICATION: The BS100LED is ideal for various applications including retail, industrial, parking, garages, carpot, parking structures, warehouses, breezeways, canopies, schools, and much more. It can be installed both indoor and outdoor.

CONFIGURATIONS

MODEL	LENGTH	OPERATION	OUTPUT	COLOR TEMP	INPUT	MOUNTING	OPTIONS
BS100LED	2 (ft)	HT (AC only)	VLO[3]	WT35 (3500K)	120-277V	SM[4] (surface mount)	SS (stainless steel clips)
BS100LED-RK[1]	4 (ft)	SA[2] (AC & EM)	LO	WT40 (4000K)	347V-480V	AC[5] (aviation cable)	FP (fuse protection - 3A)
			MO	WT50 (5000K)		SPK[6] (single pendant kit)	TPS[10] (tamper proof screws)
			HO			SVLSPK[6] (swivel single pendant kit)	TPB (tamper proof under driver bit)
						SVLDPK[6] (swivel double pendant kit)	NODL[11] (integrated node - LOGICA)
						DPK[6] (double pendant kit)	IOSL[11] (internal occupancy sensor - LOGICA)
						CH[6] (chain hang kit)	EOSL[11] (external occupancy sensor - LOGICA)
						TM[6] (trunion mount)	IOS[12] (internal occupancy sensor)
						PM (pivot mount)	IOSB[13] (internal bluetooth occ. sensor)
						JM[7] (junction mount)	EOS (external occupancy sensor)
						MM[8] (magnet mount)	SP (surge protection - 10KA)
						QMB[9] (quick mount bracket)	B[14] (black housing)
							W[15] (white housing)
							D (dali)
							FA[16] (fully assembled)

NOTE 1: RK - Retro Fit Kit; Mounting options do not apply to BS100LED-RK unit.
NOTE 2: Title 20 emergency pack; 120/277V; **2FT:** 10W, 1107 lumens; **4FT:** 10W, 1135 lumens.
NOTE 3: VLO available for 4ft only.
NOTE 4: Surface mount is standard.
NOTE 5: Specify length for AC:50", 72", 100", 150", 250" fully adjustable.
NOTE 6: SPK, DPK, CH, TM, & SVLSPK options must specify length.
NOTE 7: JM option - the unit is no longer wet location, but damp location.
NOTE 8: Magnetic mounts must be installed to steel beam measuring minimum 3/16" (4.7mm) thick.
NOTE 9: QMB must be used with JM.
NOTE 10: 18-8 stainless steel screws.
NOTE 11: Logica (Beghelli wireless and powerless control solutions). Contact factory for more details.
NOTE 12: FSP-221-requires wireless IR handheld remote (HHR-FSIR) for changing defaults and testing of occupancy sensor. Order as needed (item #476100186). For more details, contact factory.
NOTE 13: Downloadable smart phone app for sensor configuration.
NOTE 14: Does not require MOQ for 4ft.
NOTE 15: Contact factory.
NOTE 16: Includes latches and grommets installed at the factory. Can be combined with the JM option.

TECHNICAL INFORMATION



Beghelli LUCE www.beghelliusa.com 10/28/19

Beghelli reserves the right to change, without notice, specifications or materials that in our opinion will not alter the function or performance of the product. Technical specifications that appear on www.beghelliusa.com supersede all other versions existing in print or electronic form.

TYPE "F5"

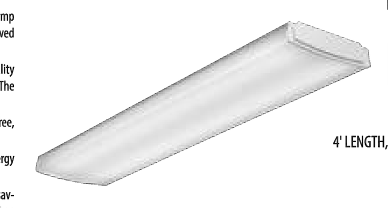
LITHONIA LIGHTING®

Catalog Number
Notes
Type

Low-Profile Curved-Basket LED Wraparound

LBL4

4' LENGTH, NARROW HOUSING
LED



Buy American | eldoLED

FEATURES & SPECIFICATIONS

INTENDED USE — LBL LED wraparound provides a digital lighting platform to deliver general ambient lighting for surface-mount applications. The LED system delivers long life and excellent color to ensure a quality, low-maintenance lighting installation. Ideal for closets, storage rooms, hallways, stairwells and offices.

CONSTRUCTION — Metal parts are die formed from pre-painted code-gauge steel. Prismatic diffuser is 100% acrylic with sonically welded luminous ends. Continuous side flanges on fixture body provide light trap and continuous diffuser support to prevent accidental opening and simplify maintenance.

OPTICS — Curved prismatic diffuser with linear side prisms and highly transmissive overlay minimizes lamp image and provides high-angle brightness control. Luminous end plates soften appearance for improved aesthetics.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide superior quantity and quality of illumination for extended service life. 90% LED lumen maintenance at 50,000 hours (L90/50,000). The LEDs have a CRI of 82.

eldoLED driver options deliver choice of dimming range and choices for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI.

Step-level dimming option allows system to be switched to 50% power for compliance with common energy codes while maintaining fixture appearance.

CONTROLS — Pair the LBL with the fixture mount Sensor Switch LSXR sensor for additional energy savings when the space is unoccupied. The LSXRHL sensor dims the fixture down to a low-level setting when there is no occupancy. This option is ideal for stairwells, back rooms, and closets due to the low occupancy level in those spaces.

Optional nLight® embedded controls continuously monitor system performance, allow for constant lumen management / compensation function, facilitate simple "plug-and-play" network and controls upgrading via Cat-5 cable. Ballast disconnect provided where required to comply with US and Canadian codes.

LISTINGS — CSA certified to meet U.S. and Canadian standards. Damp listed.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

BUY AMERICAN — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

A+ Capable Luminaire

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- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a shaded background*
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

TYPE "F3A"

J7.1.1G4

ATRIUS READY | indy | Buy American

800 TO 9000 LUMEN 6" LED
NEW CONSTRUCTION/REMODEL/FLANGELESS
HYPERBOLIC / PARABOLIC / WALLWASH
L6 / LRM6 SERIES

Type	Cat. No.

Project: ______
Notes: ______

ENVIRONMENTALLY FRIENDLY, ENERGY EFFICIENT

- Lumen packages suitable for ceiling heights ranging from 8´ to in excess of 100´
- Efficacies up to 124 lm/w
- Superior-quality white LED light output using Chip on Board technology
- Patented Hyperbolic Reflector (U.S. Patent No. 10,670,227 B2)

PRODUCT SPECIFICATIONS

Atrius™ - Ready Product: Select models of the L-series product line deliver valuable data and connectivity to the Atrius IoT location based platform services. For more information, please refer to www.acuitybrands.com/Atrius.

OPTICS
Hyperbolic: Patented hyperbolic shape (U.S. Patent No. 10,670,227 B2) optimized for small, directional LED source, maximizes fixture efficiency while creating the "Silent Ceiling" appearance by reducing lamp image and aperture brightness • Geometry of hyperbolic curve provides unique aperture appearance and smoother light distribution
Parabolic/Lens: Computer-optimized parabolic reflector with frosted convexed lens regressed into cone provides uniform distribution with no striations
Wall Wash: Available in Hyperbolic and Parabolic. Both providing uniform distributions with no striations
Baffle: White or black painted deep multi-groove aluminum baffle insert with integral white painted flange and frosted convexed glass lens

ELECTRICAL
LED Light Engine: Compact light source delivers uniform illumination without pixilation, enabling excellent beam control • 2SDCM (5000K within 3SDCM) • 80, 90 & 97 CRI • Replaceable light engine with push in wire connections mounts directly to heat sink and is easily replaceable
Passive Cooling: Aluminum heat sink integrated directly with housing provides superior thermal management to ensure the long life of LED
LED Driver: Power factor >0.9 • Easily replaceable from above or below the ceiling
Dimming: Dimmable via 0-10V protocol standard • Optional drivers available for use with eldoLED, Lutron EcoSystem, 2-wire dimmers, DMX, or DALI • For a list of compatible dimmers, see LED-DIM.
Life: Rated for 60,000 hours at 70% lumen maintenance • Available with optional Lumen Depreciation Indicator, LDI option (U.S. Patent No. 9,119,269)
Emergency Battery Pack (Optional) output: Provides a minimum of 600 (BR & BRT20C), or 1000 (HBR) lumens for a minimum duration of 90 minutes • BRT20C option is CEC Title 20 compliant

Buy American: This product is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.
Warranty: 5 years when used in accordance with manufacturing guidelines.
Specifications subject to change without notice.

A+ Capable options indicated by this color background

Design2Ship Quick Ship Program: Options in green text qualify for Design2Ship — 5 business days from order entry to ship. Refer to Design2Ship Brochure for complete program details. **Maximum Order Quantity: 50 units.**

ORDERING INFORMATION Complete Catalog# Example Includes (Rough-In, option, reflector, accessory) Ordering Example: L6 08LM 35K MVOLT G4 80CRI ZT LDI HW CS PF HBTL

ROUGH-IN

Series	Light Engine	Color Temperature	Voltage	Generation	CRI	Driver	Rough-In Options
L6 6" L-Series New Construction Downlight LRM6[14] 6" L-Series Remodel Rough-in	08LM 13LM 15LM 17LM 23LM 28LM 33LM 40LM 45LM 50LM 55LM 60LM 65LM 70LM 75LM 80LM 85LM 90LM	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	120 277 347 MVOLT[1] (120-277)	G4	80CRI 90CRI 97CRI[2]	DALI DALI Control Dimming DMXR DMX/RDM Driver EDAB eldoLED SOLOdrive DALI, Logarithmic dimming to <1% EDXB eldoLED POWERdrive DMX/RDM w/ Phoenix Connectors, Dimming to <1% EZ10 eldoLED 0-10V ECOdrive, Linear dimming to 10% min. EZ1 eldoLED 0-10V ECOdrive, Linear dimming to 1% min. EZB eldoLED 0-10V SOLOdrive, Logarithmic dimming to <1% FD[5,7] Forward or Reverse Phase Dimming Driver FDL[7,8,18] Forward Phase Dimming Lutron Driver ECOD[8,18,24] Lutron Ecosystem 2-Wire Dimming Driver ZT 0-10V Dimming to 10% min GZ1[5] 0-10V Dimming to 1% min	F[3,9] Fuse and Fuse Holder CP[10] Chicago Plenum LDI Lumen Depreciation Indicator BR[3,4,13] 600 Lumen Emergency Battery Pack w/Remote Test Switch BRT20C[3,4,13] 600 Lumen Emergency Battery Pack w/ Remote Test Switch, CEC Title 20 Compliant HBR[3,4,13] 1000 Lumen Emergency Battery Pack w/Remote Test Switch N80 nLight Dimming Pack Controls N80EM nLight dimming pack controls LEDs; controls fixtures on emergency circuit NLTAIR2 nLight AIR Dimming Pack Wireless Controls NLTAIRER2 nLight AIR Dimming Pack Wireless Controls. Controls fixtures on emergency circuit AE2CD[20,21] Atrius™ - Ready, VLC Commissioning, Radio (BT Positioning)

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TYPE "F2"

LITHONIA LIGHTING®

Catalog Number
Notes
Type

GTL Series

2GTL

2' x 4'
LED Recessed Troffer

Buy American

FEATURES & SPECIFICATIONS

INTENDED USE — The 2GTL LED recessed troffer offers a wide range of lumen packages, color temperatures, and lens options to meet the lighting needs for a wide range of applications such as schools, offices, and hospitals. The light engine delivers long life and excellent color to ensure a sound quality, low-maintenance lighting installation. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.

CONSTRUCTION — Housing formed from 22 gauge cold-rolled steel. Smooth hemmed sides and smooth inward formed end flanges for safe handling. Includes integral T-bar clips. Lighter-weight fixture allows for safe, easy installation.

OPTICS — Highly transmissive pattern #12 lens diffuses the light source without compromising output. Pattern # 19 and satin white lens options also available.

ELECTRICAL — Long-life LEDs, coupled with high-efficiency drivers, provide extended service life. 80% LED lumen maintenance at 72,000 hours (L80/72,000).

eldoLED driver options deliver choice of dimming range, and choices for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI.

Optional nLight® embedded controls make each luminaire addressable - allowing it to digitally communicate with other nLight enabled controls such as dimmers, switches, occupancy sensors and photocontrols. Simply connect all the nLight enabled control devices and the GTL luminaires using standard Cat-5 cabling. Unique plug-and-play convenience as devices and luminaires automatically discover each other and self-commission.

Lumen Management: Unique lumen management system (option N80) provides onboard intelligence that actively manages the LED light source so that constant lumen output is maintained over the system life, preventing the energy waste created by the traditional practice of over-lighting.

The step-level dimming option (SLD) allows the system to be switched to 50% power for compliance with common energy codes while maintaining fixture appearance.

Ballast disconnect is provided where required to comply with U.S. and Canadian codes.

INSTALLATION — LED boards include plug-in connectors for easy of upgradeability. Suitable for direct insulation contact. Suitable for damp location.

LISTINGS — CSA Certified to meet U.S. and Canadian standards. IC rated. DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

BUY AMERICAN — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT.
Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

Specifications
Length: 48 (122.0)
Width: 24 (61.0)
Depth: 3-1/4 (8.2)

3-1/4 (8.2)
24 (61.0)

All dimensions are inches (centimeters) unless otherwise indicated.

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a shaded background*
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

LIGHTING FIXTURE CUT SHEETS
(FOR REFERENCE ONLY)

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UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

FBA Engineering / Plot Date: 9/29/2022 8:24 AM / Plotted by: Steve Roth / Drawing Location: I:\535\050\E-0.02_535050.dwg

FBA Engineering
Consulting Electrical Engineers
150 Paularino Avenue Suite A120
Costa Mesa, CA 92626
949.852.9995 • 949.852.1657 (fax)
fbaengr.com
FBA Job Number: 535050

REGISTERED PROFESSIONAL ENGINEER STEVEN R. ROCK No. E 10372 Exp. 09-30-22 ELECTRICAL STATE OF CALIFORNIA

CITY OF GARDENA FREEWAY CITY INCORPORATED 1930

PREPARED BY:
RJM DESIGN GROUP
31591 Camino Capistrano
San Juan Capistrano, CA 92675
www.RJMdesigngroup.com
[949] 493-2690 fax
[949] 493-2600 phone

LICENSED LANDSCAPE ARCHITECT LARRY P. RYAN LICENSE NO. 2502 Signature 09/30/2023 Renewal Date 9/29/2022 Date STATE OF CALIFORNIA

REVISIONS

NO.	DESCRIPTION	DATE	APPROVED

B.M.: THE CITY OF GARDENA BENCHMARK NO. 5D-15
ELEV. = 43.508'

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING
LIGHTING FIXTURE CUT SHEETS
COMMUNITY AQUATICS & SENIOR CENTER
E-0.02C

	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	BZ	05/25/2022

APPROVED BY:
DATE ______ DIRECTOR OF PUBLIC WORKS

SHT. 127 OF 157 DWG. NO. ______

FILE PATH: I:\535\050\E-0.02_535050.DWG, PLOT TIME: 9/29/2022 8:24:16 AM

HYDREL

CATALOG NUMBER TYPE "S2"

NOTES

TYPE

ASPEN LED

12V/120V LED

Specifications

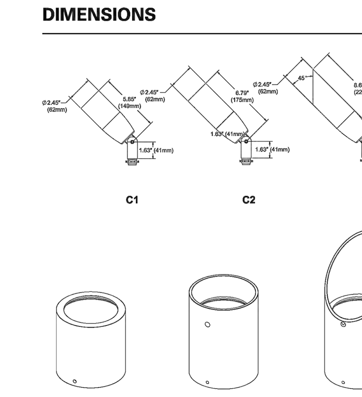
Weight:	1.6 lbs
H:	5.85" (149mm) w/C1 6.79" (172mm) w/C2 8.65" (220mm) w/C3

HIGHLIGHTS

- Accent lights are suitable for a variety of mounting applications including ground, wall, tree, sign and architectural accents
- Suitable for wet locations
- Integral driver for 120V
- Dimmable using standard Triac dimmer for 120V and dimmable using standard MLV dimmer and magnetic transformer for 12V
- Tapered-sure lock
- Available in 80CRI and 90CRI
- 1,100lm

LED 5 YEAR warranty 66 IP RATED WET LOCATION Buy American

DIMENSIONS

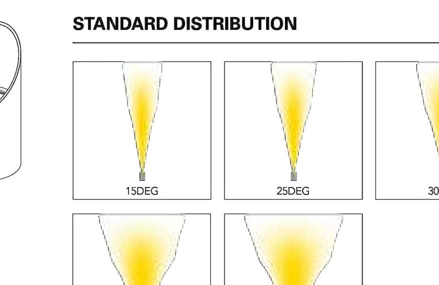


LUMEN PACKAGES

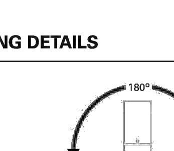
	15DEG	20DEG	25DEG	30DEG	35DEG	40DEG	45DEG	50DEG	55DEG
Delivered Lumens	685	623	659	642	674	656	634	639	641
Watts	11	11	11	11	11	11	11	11	11
LPW	62	57	60	58	61	60	58	58	58
Peak Candela	5,054	2,725	2,827	1830	1549	1212	982	742	664

Note: Information based on 4000K @ P1, 80CRI, 120 Volt with C1 cap and FLC lens

STANDARD DISTRIBUTION



AIMING DETAILS



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TYPE "S1"

WDGE2 LED

Architectural Wall Sconce

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

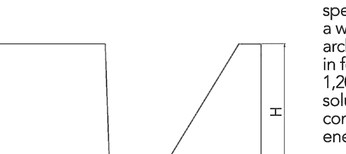
Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 delivers up to 6,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

Specifications

Depth:	7"
Height:	9"
Width:	11.5"
Weight: (without options)	13.5 lbs



WDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K) P1	P2	P3	P4	P5	P6
WDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE2 LED P3 40K 80CRI VF MVOLT DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE2 LED	P1[1] P1SW; P2[1] P2SW; P3[1] P3SW; P4[1] Door with small window (SW) is required to accommodate sensors. See page 2 for more details.; P5[1]	27K 2700K; 30K 3000K; 35K 3500K; 40K 4000K; 50K[2] 5000K	80CRI; 90CRI	VF Visual comfort forward throw; VW Visual comfort wide	MVOLT; 347[3]; 480[3]	Shipped included: SRM Surface mounting bracket. Shipped separately: AWS 3/8inch Architectural wall spacer; BBW Surface-mounted back box; PBBW Premium surface-mounted back box (top, left, right conduit entry)

Options

E4WH	Emergency battery backup, CEC compliant (4W, 0°C min)
E10WH	Emergency battery backup, CEC compliant (10W, 5°C min)
E20WC	Emergency battery backup, CEC compliant (18W, -20°C min)
PE[4]	Photocell, Button Type
DS[5]	Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)
DMG[6]	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)
BCE	Bottom conduit entry for premium back box (PBBW). Total of 4 entry points.

Standalone Sensors/Controls (only available with P1SW, P2SW & P3SW)

PIR	Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.
PIRH	Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching
PIR1FC3V	Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.
PIRH1FC3V	Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.

Networked Sensors/Controls (only available with P1SW, P2SW & P3SW)

NLTAIR2 PIR	nLightAIR Wireless enabled bi-level motion/ambient sensor for 8-15' mounting heights.
NLTAIR2 PIRH	nLightAIR Wireless enabled bi-level motion/ambient sensor for 15-30' mounting heights.

See page 4 for out of box functionality

Finish

DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DSSXD	Sandstone
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white
DSSTXD	Textured sandstone

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TYPE "X1" / "X2"

LITHONIA LIGHTING®

Catalog Number

Notes

Type

FEATURES & SPECIFICATIONS

INTENDED USE — Ideal for applications requiring attractive die-cast aluminum signage, superior illumination and low energy consumption.

CONSTRUCTION — Precision-molded, die-cast aluminum construction — ultra-slim, compact housing. Fine-grain brushed aluminum faceplate with matte black electrostatic polymeric trim. Clear lacquer finish on brushed face inhibits fingerprints and other surface contaminants.

All electronics located inside housing.

Fully overlapping light seal prevents light leaks. Universal directional chevron knockouts are completely concealed and easily removed. Hinged faceplate and spring latches for easy lamp compartment access, no exposed hardware.

Letters 6" high with 3/4" stroke, with 100 ft viewing distance rating, based upon UL924 standards.

U.S. Patent No. 5,739,639, 5,954,423 and 6,502,044. Canada Patent No. 2,204,218. Other patents pending.

OPTICS — Lamp is constructed using new LED technology. Provides perfectly uniform illumination to meet 3/4" letter stroke required by code.

The typical life of the exit LED lamp is 10 years, based on continuous operation. Unique LED lamp platform accommodates both single-face and double-face exits.

Low energy consumption — red exit consumes std .81W, 1.3W (120V), green exit consumes std is 1W, 1.5W (120V). Universal input voltage capabilities (120V through 277V, 50 or 60 HZ).

ELECTRICAL — Solid-state electronic elements to eliminate risk of electromechanical failures.

Surge protection meets ANSI/IEEE C62.41 category B and IEC 1000 immunity standards for high voltage surges, electrostatic discharges, high frequency electrical fast transients and line voltage dips/swells.

Emergency Operation (for EL N option only): Battery: Sealed, maintenance-free nickel-cadmium battery delivers 90 minutes capacity to lamp.

Self-diagnostics (SD option only): Two-state constant-current charger maximizes battery life and automatically recharges after battery discharge. Test switch provided for manual testing.

Self-diagnostic testing for five minutes every 30 days, 30 minutes at 180-day interval, and 90 minutes annually.

Diagnostic evaluation of LED light source, AC to DC transfer, charging and battery condition.

Continuously monitors AC functionality.

Low voltage disconnect prevents excessive deep discharge that can permanently damage the battery.

Single-point microcomputer control for all electronic features.

Crystal oscillator timing system with watchdog protection for precision accuracy.

AC/LVD reset allows battery connection before AC power is applied and prevents battery damage from deep discharge.

Brownout protection is automatically switched to emergency mode when supply voltage drops below 80% of nominal.

Single multi-chromatic LED indicator to display two-state charging, test activation and three-state diagnostic status.

Test switch provides manual activation of 30-second diagnostic testing for on-demand visual inspection.

Signature®

Die-Cast Aluminum Exits

LE and LRE

CERTIFIED IN TITLE 20 † LED Buy American

INSTALLATION — Universal mounting (top, end or back). Double face available with top or end mounting only. LRE: Trim ring has 3/4" depth adjustment to ensure a flush fit against the surface. Protrudes 1/10" from the surface. No exposed hardware.

Die-cast aluminum canopy provided for surface mount only.

LISTINGS — UL damp location listed 50°F - 104°F (10°C - 40°C). Meets UL 924, NFPA 101 (current Life Safety Code), NEC and OSHA illumination standards. North Carolina Department of Insurance.

BUY AMERICAN — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT.

Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY — 5-year limited warranty. (Battery is prorated.) Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

† Small Battery Chargers Certified in the CA Title 20 Appliance Efficiency Database.

ORDERING INFORMATION For shortest lead times, configure products using **bolded options.**

Example: LE S 1 R EL N SD

Series	Face type	Housing color	Number of faces	Letter color	Input voltage	Operation	Options
LE LED, surface mount; LRE LED, recessed	S Stencil; P Panel[1]	(blank) Matte black, brushed aluminum face; BZ Dark bronze; W White; B Matte black	1 Single face; 2 Double face[2]	R Red; G Green	(blank) Universal input voltage (120-277V, 50 or 60 HZ)	(blank) AC only; EL N Nickel-cadmium battery back-up; X2 Lamp wired on two separate AC circuits[3]	(blank) None; TP Two tamper proof Torx-head screws; VR Vandal-resistant shield (1/8" thick polycarbonate)[4]; FI FA Field selectable fire alarm interface or flashing emergency operation with intermittent audible alarm (one flash per minute)[5]; FI Fire alarm flashing interface[6]; FA Flashing emergency operation and intermittent audible alarm[7]; SD Self-diagnostics[7]; BAA BAA Buy America(n) Act Compliant[8]

Accessories: Order as separate catalog number.

ELA US12	12" stem kit (see spec sheet ELA-StemKits)[2,9]
ELA WG1	Back-mount wire guard (see spec sheet ELA-WG)[2]
ELA WGEXT	Top-mount wire guard (see spec sheet ELA-WG)[2]
ELA WGEXE	End-mount wire guard (see spec sheet ELA-WG)[2]
ELA ERK	Recess mounting rough-in kit for LRE only (see spec sheet ELA-ERK)

Notes
1 Panel face available for special wording only (see Custom Signage spec sheet).
2 Not available with LRE models.
3 UL Listed as emergency lighting.
4 VR contains tamper proof screws.
5 Available with SD option only.
6 Available with AC only or EL N operation only.
7 Available with EL N option only.
8 BAA only available for LE.
9 Add W for white.

TYPE "F8"

Cylindro II chandeliers (BG67)

circular LED pendants with white acrylic diffuser

delray.

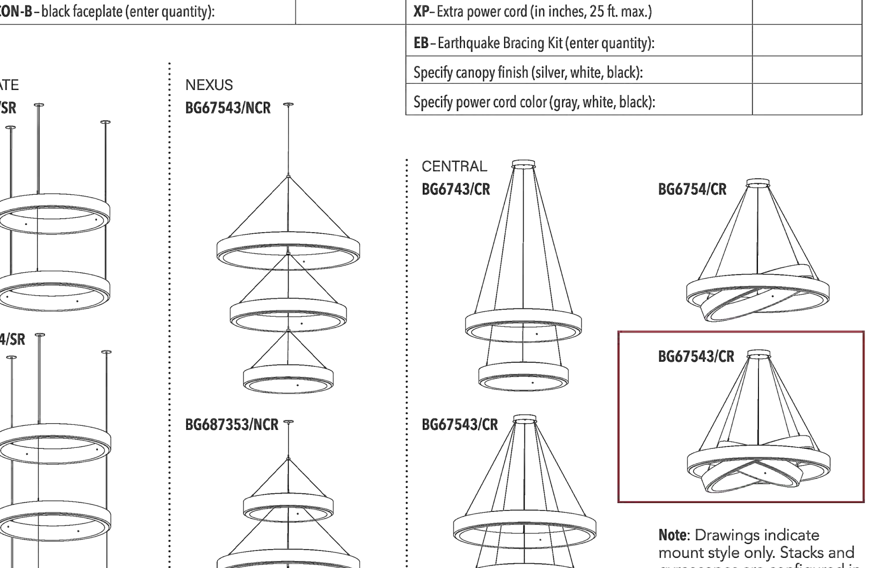
CONSTRUCTION
- Extruded aluminum outer housing, with frosted white acrylic diffuser.
- 6 ft. gray adjustable power cord and aircraft cables, gripper supplied, standard. Specifiy **XP** for additional length. Default finish/power cord pairings are silver/gray, white/white, black/black.
- For differing fixture/canopy colors, please consult factory.
- Drivers and DMX module installed in surface mount canopy. For remote driver installation, see page 2.
- Drivers are universal voltage, 120–277V.
- Specify: **S**, **C**–standard canopy (10" x 2.25"), which mounts to all standard J-boxes and must attach to structure able to support 75 lb. **SR**, **CR**, **NCR**–remote canopy (3" x 0.45") mounts to 3" mud ring.
- cUL listed for dry and damp locations only.

TYPE: PROJECT:

ORDER NUMBER:

MODEL#	DIAMETERS	FINISH	OUTPUT	LEDS	MOUNT STYLE	DRIVER	OPTION
BG67	3–3 ft. 4–4 ft. 5–5 ft.	S–Silver W–White K–Black (see page 3 for more)	LO–Low HO–High	W30 W35 W40 RGBW–color + 3500° K white	S–Separate SR–Separate Remote C–Central CR–Central Remote NCR–Nexus CR	D–Standard BDIM-W11 DMX DA–DALI	EM
Example:							
BG67	345	S	HO	W35	SR	D	

BDMXCON-W–white faceplate (enter quantity):		XL–custom lumen reduction (specify lumens):	
BDMXCON-B–black faceplate (enter quantity):		XP–Extra power cord (in inches, 25 ft. max.)	
		EB–Earthquake Bracing Kit (enter quantity):	
		Specify canopy finish (silver, white, black):	
		Specify power cord color (gray, white, black):	



Note: Drawings indicate mount style only. Stacks and gyroscopes are configured in the field by adjusting aircraft and power cable lengths. Stacked fixtures must all be the same diameter.

OCT 2021

delraylighting.com

HYDREL

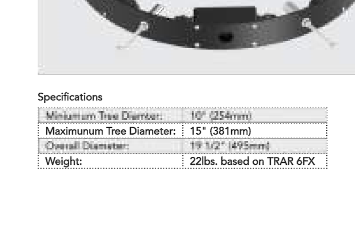
CATALOG NUMBER TYPE "S2" Tree Ring

NOTES

TYPE

TRAR

Tree Ring Architectural



Specifications

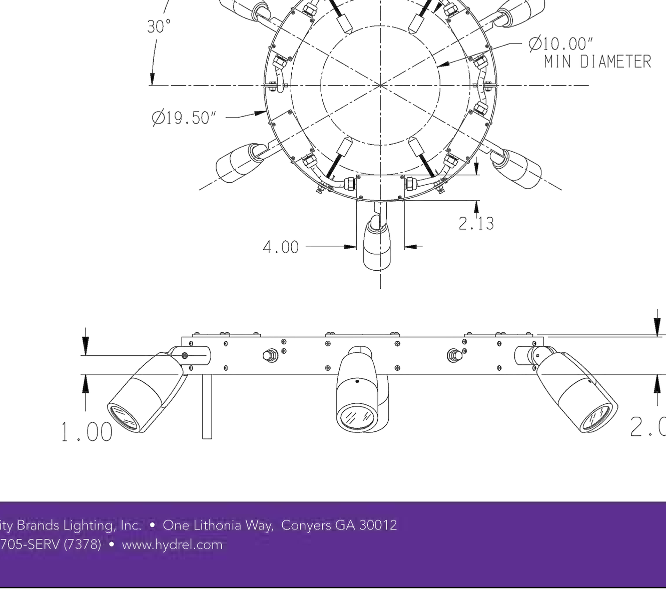
Minimum Tree Diamter:	10" (254mm)
Maximunum Tree Diameter:	15" (381mm)
Overall Diameter:	19 1/2" (495mm)
Weight:	22lbs. based on TRAR 6FX

HIGHLIGHTS

IP66 LED Buy American

- Thoughtful and durable design, available in 2, 3, 4, 5 and 6 fixture configurations
- IP66 rated aluminum junction box
- Stainless Steel fasteners
- Designed for 10"-15" diameter trees. Please consult factory for custom diameters.
- For specified Hydrel landscape and accent fixtures
- Matching tree ring and jbox finish

DIMENSIONS



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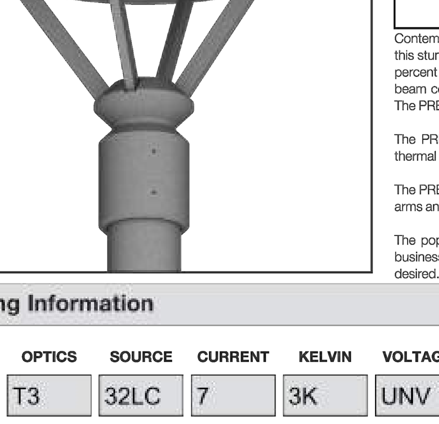
TYPE "S3"

PRE-2-M LED Specifications



Project Name:

Catalog Number:

Type:

Contemporary design meets the new generation of LED green technology in this stunning lumenaire, the **PRE-2-M**. The PRE-2-M series provides up to fifty percent energy savings over traditional HID light sources; and offers excellent beam control and LED life beyond 100,000 hours for 350 milliamp systems. The PRE-2-M is offered in six optical distributions.

The PRE-2-M's fully-sealed housing features an exceptionally well-designed thermal management system that provides superior heat dissipation.

The PRE-2-M fixture is built with a cast aluminum housing, extruded aluminum arms and a spun aluminum, removable top.

The popular **PRE-2-M** is the perfect compliment to any university campus, business park, or walkway project where contemporary, architectural design is desired.

Ordering Information

MODEL	OPTICS	SOURCE	CURRENT	KELVIN	VOLTAGE	MOUNTING	FINISH	OPTIONS	OPTIONS
PRE-2-M	T3	32LC	7	3K	UNV	PT	BZ		
PRE-2-M	T1 T2 T3 T4 T5 T5W T5WR	16LC 32LC 48LC	3 350mA; 5 530mA; 7 700mA	3K 3000K; 4K 4000K; 5K 5000K	UNV 120-277V; 8 347V; 5 480V	PT Post Top *Slips over 3" OD tenon X 4.5" tall as standard	BZ Bronze; BK Black; SBK Smooth Black; WH White; SWH Smooth White; GP Graphite; GY Grey; SL Silver Metallic; CC Custom Color	PC-120 PC-208 PC-240 PC-277 Button Type Photocell; WSC-8 Motion Sensor 8' Mounting Height; WSC-20 Motion Sensor 9-20' Mounting Heigh; WSC-40 Motion Sensor 21-40' Mounting Height This option will require (1) FSIR 100 remote for programing	DIM 0-10v Dimming Driver; VWC Visionaire Wireless Controls *Consult Factory; IR-(R, B, G Illuminated Rings (Red, Blue, Green); PER 3, 5, or 7 Pin Photo Receptacle w/shorting cap

VISIONAIRE LIGHTING

A

TYPE "X1W" / "X2W"

LITHONIA LIGHTING®

Catalog Number

Notes

Type

FEATURES & SPECIFICATIONS

INTENDED USE — Ideal for wet location areas requiring exit signs for AC only or battery back-up power that are subject to saturation with non-mechanically delivered water.

CONSTRUCTION — White, compact, contemporary design. Engineering-grade thermoplastic housing is impact-resistant, scratch-resistant and corrosion-proof. Universal directional Chevron inserts are easily removed and reinserted. UL94V-0 flame rating. UV-stable resin resists discoloration from natural and man-made light sources. Rugged, heavy-duty, polycarbonate clear housing lens. Housing also available in black or gray. Letters 6" high with 3/4" stroke, with 100 ft. viewing distance rating, based upon UL924 standards.

OPTICS — Low energy consumption — fewer than 5 watts. The typical life of the exit LED lamp is 10 years, based on continuous operation.

ELECTRICAL — Dual voltage input capacity (120/277V).

Battery: (EL Option) – Sealed, maintenance free nickel-cadmium battery delivers 90 minutes rated capacity. Test switch provides manual activation of 30-second diagnostic testing for on-demand visual inspection.

Self-diagnostic testing (SD Option Only) for 30 seconds every 30 days, 30 minutes every 180 days and a 90-minute annual test. Diagnostic evaluation of LED light source, charging and battery condition.

INSTALLATION — Universal (top, end or back mount), canopy included. Junction box hole pattern for 4" octagon mounting. Flexible conduit entry.

LISTINGS — UL listed. Wet location listed. Standard cold temperature rating -4°F to 122°F (-20°C to 50°C). Meets UL 924, NFPA 101 (current Life Safety Code) and NFPA 70-NEC

WARRANTY — 5-year limited warranty. (Battery is prorated.) Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

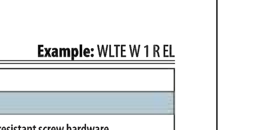
Wet Location Exit Sign

WLTE

LED

Specifications

Length: 12-1/2 (31.8)
Depth: 2-1/2 (6.4)
Height: 8-1/8 (20.6)
Weight: 4.1 lbs (1.9 kg)



All dimensions are inches (centimeters) unless otherwise indicated.

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Example: WLTE W 1 R EL

Series	Housing color	Number of faces	Letter color	Operation	Options
WLTE	W White; B Black; GY Gray	1 Single face; 2 Double face	R Red; G Green	(blank) AC only; EL Nickel-cadmium battery	TP Tamper-resistant screw hardware; SD Self-diagnostics[1]

Accessories: Order as separate catalog number.[2]

ELA WG1	Wireguard (back mount only)

Notes
1 Only available with EL option.
2 See spec sheet ELA-WG.

LITHONIA LIGHTING®

Catalog Number

Notes

Type

FEATURES & SPECIFICATIONS

INTENDED USE

Provides an LED lighting platform to deliver general or task lighting for residential and light commercial applications. Light engine delivers long life and excellent color to ensure a quality, low-maintenance light installation. Ideal for use in bathrooms, lavatories, hallways, corridors, stairways, utility areas and more.

CONSTRUCTION

The Traditional Square Vanity is constructed of an acrylic diffuser with housings available in brushed nickel. The white acrylic diffuser provides even illumination and softens the appearance of the LEDs for improved aesthetics.

OPTICS

2' produces 1300 lumens, 3' produces 1900 lumens, and 4' produces 2500 lumens at 3000K with 50,000 hours of life.

Extruded acrylic diffuser is of highly transmissive material to minimize LED image and provides high-angle brightness control.

ELECTRICAL

Long-life LEDs, coupled with a multivolt driver, provide extended service life. Standard input = 9.5 watts, (2'); 26 watts, (3'); 34 watts, (4'). Fixture is rated to deliver L70 performance at 50,000 hours and operates at 120-277 volts.

Use with non-dimmable switches only.

LISTINGS

UL Listed to US and Canadian safety standards. Listed for damp locations. ENERGY STAR® certified.

WARRANTY

5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

NOTE: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Decorative Indoor

Traditional Square Vanity

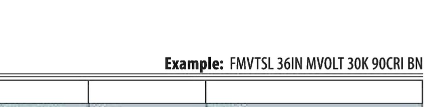
VANITY LED

ADA

U.S. PATENT PENDING

SPECIFICATIONS	2FT	3FT	4FT
Length:	23-7/16 (595)	35-1/4 (895)	47-1/16 (1195)
Weight:	7.3 (3.3)	10 (4.5)	12.7 (5.8)
3000K Lumens (LPW)	1302 (72)	1919 (73)	2551 (75)
4000K Lumens (LPW)	1373 (76)	2024 (77)	2689 (79)

All dimensions are inches (millimeters) unless otherwise indicated. Weights are pounds (kilograms).



ORDERING INFORMATION For shortest lead times, configure product using **bolded options.**

Example: FMVTSL 36IN MVOLT 30K 90CRI BN

Series	Length	Voltage	Color temperature	CRI	Finish
FMVTSL Traditional Square Vanity	24IN 2' Nominal; 36IN 3' Nominal; 48IN 4' Nominal	MVOLT MVOLT (120V-277V)	30K 3000 K	90CRI >90	BN Brushed Nickel

LIGHTING FIXTURE CUT SHEETS (FOR REFERENCE ONLY)

FBA Engineering / Plot Date: 9/29/2022 8:24 AM / Plotted by: Steve Roth / Drawing Location: I:\535\050\E-0.02_535050.dwg

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UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

FBA Engineering
Consulting Electrical Engineers
150 Paularino Avenue Suite A120
Costa Mesa, CA 92626
949.852.9995 • 949.852.1657 (fax)
fbaengr.com
FBA Job Number: 535050

REGISTERED PROFESSIONAL ENGINEER STEVEN R. ... No. E 10372 Exp. 09-30-22 ELECTRICAL STATE OF CALIFORNIA

CITY OF GARDENA FREEWAY CITY INCORPORATED 1930

PREPARED BY:
RJM DESIGN GROUP
31591 Camino Capistrano
San Juan Capistrano, CA 92675
www.RJMdesigngroup.com
[949] 493-2690 fax
[949] 493-2600 phone

LICENSED LANDSCAPE ARCHITECT LARRY P. RYAN LICENSE NO. 2502 Signature 09/30/2023 Renewal Date 9/29/2022 Date STATE OF CALIFORNIA

REVISIONS			
NO.	DESCRIPTION	DATE	APPROVED

B.M.: THE CITY OF GARDENA BENCHMARK NO. 5D-15 ELEV. = 43.508'

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING

LIGHTING FIXTURE CUT SHEETS

COMMUNITY AQUATICS & SENIOR CENTER

E-0.02D

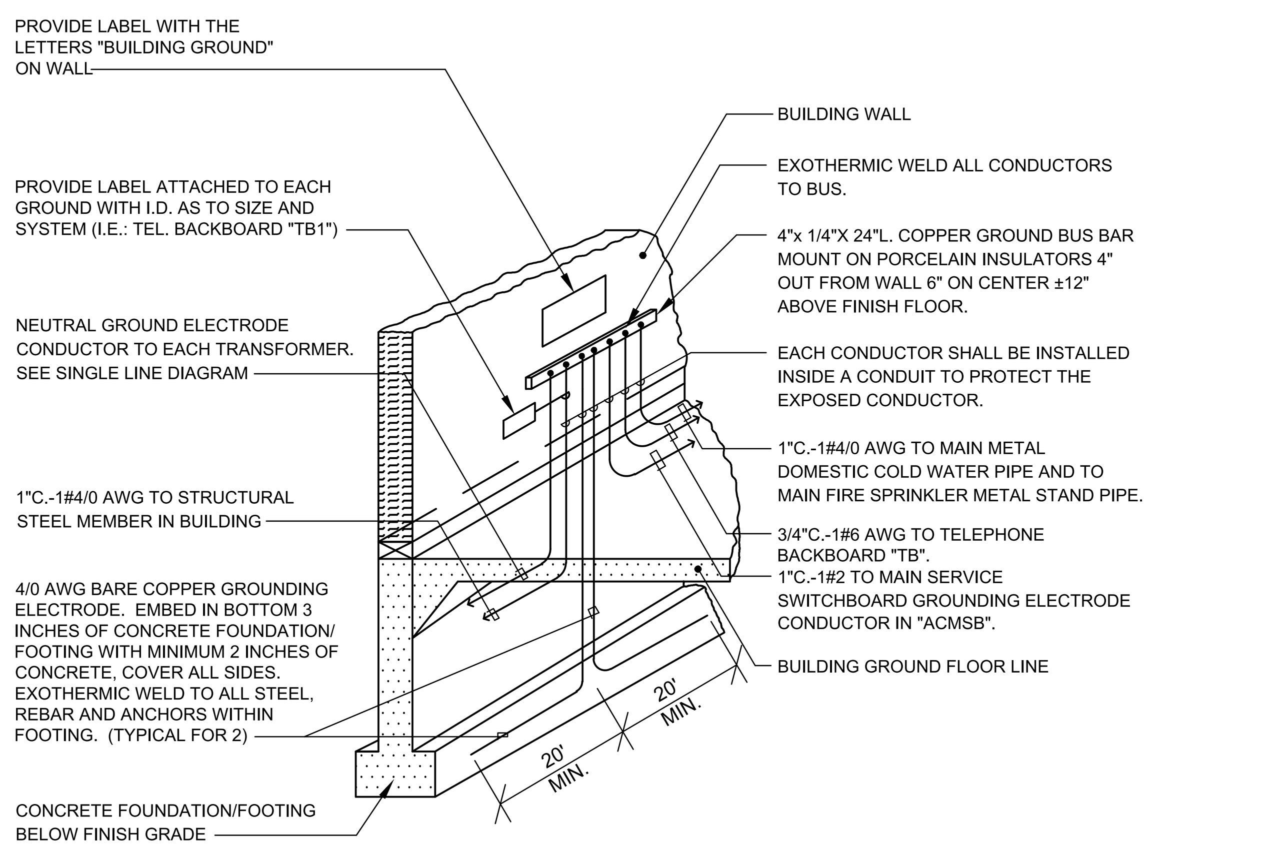
	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	BZ	05/25/2022

APPROVED BY:

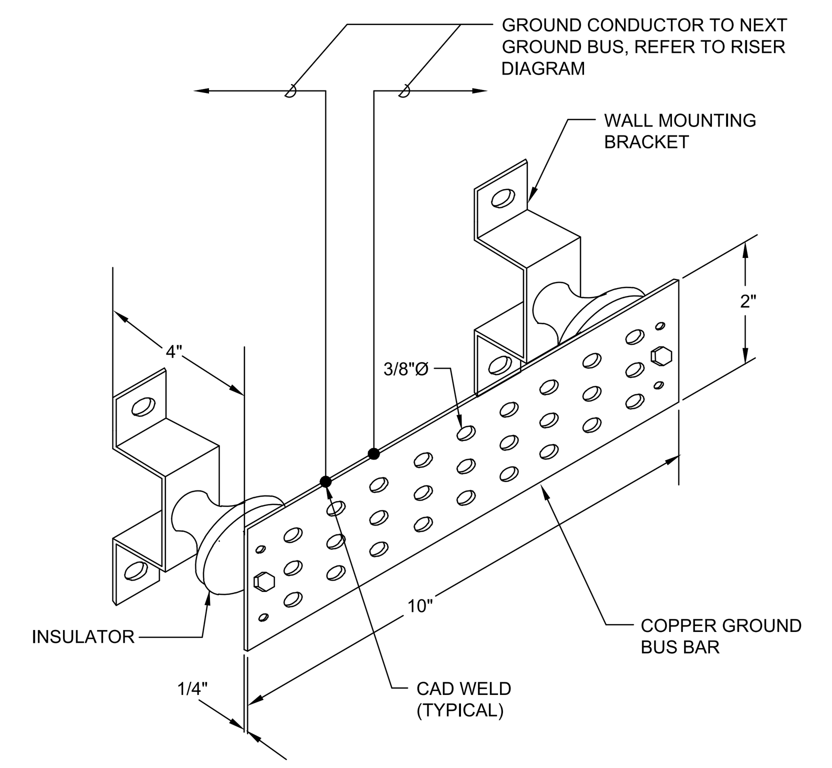
DATE DIRECTOR OF PUBLIC WORKS

SHT. 128 OF 157 DWG. NO.

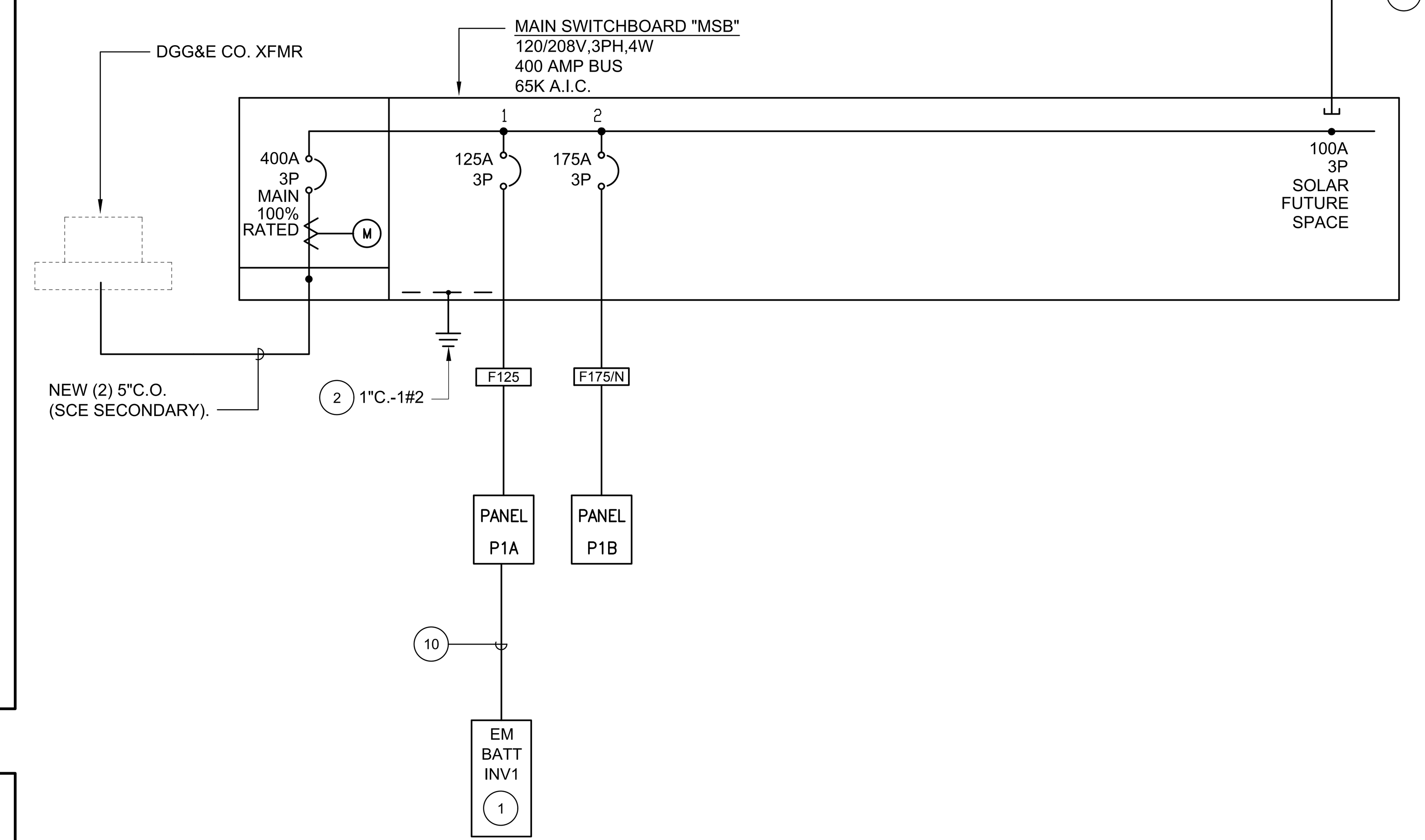
FILE PATH: I:\535\050\E-0.02_535050.DWG
PLOT TIME: 9/29/2022 8:24:22 AM
FILE PATH: I:\535\050\E-0.02_535050.DWG, PLOT TIME: 9/29/2022 8:24:22 AM



BUILDING ELECTRICAL SERVICE GROUND BUS DETAIL (1)
(UFER GROUND) NOT TO SCALE

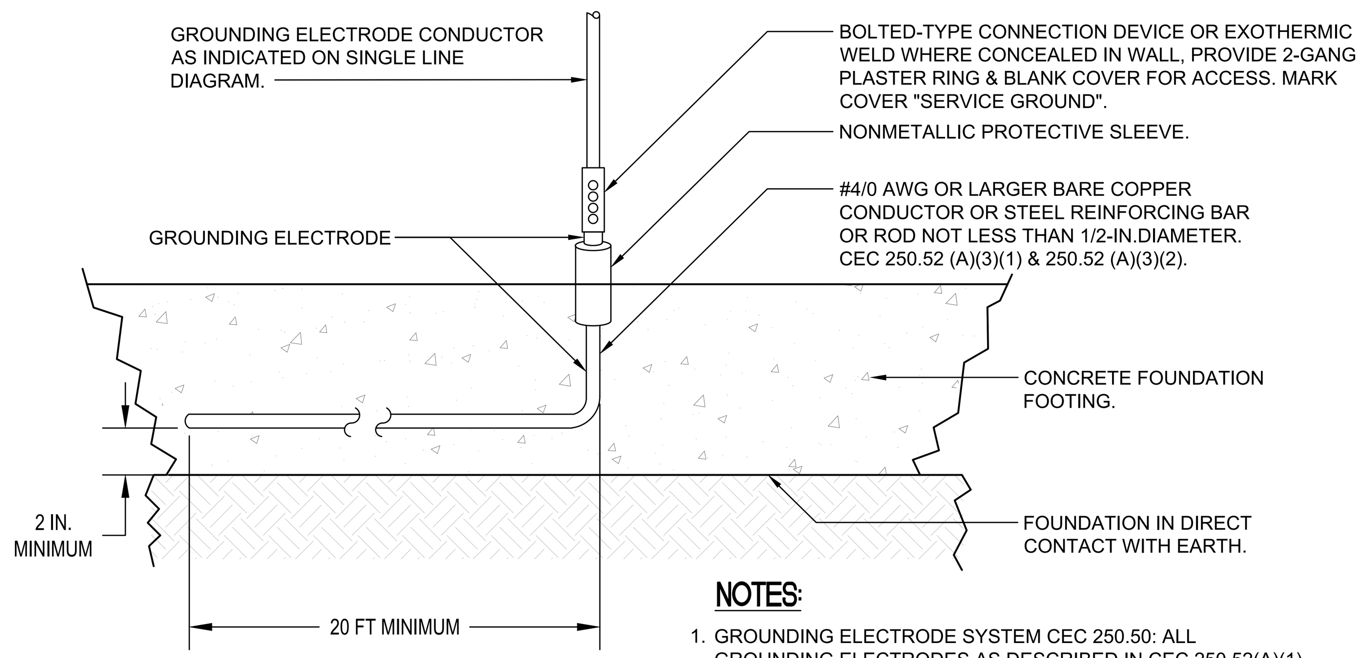


INTERSYSTEM BONDING TERMINATION BUS BAR DETAIL (2)
NOT TO SCALE



SINGLE LINE DIAGRAM PLAN NOTES:

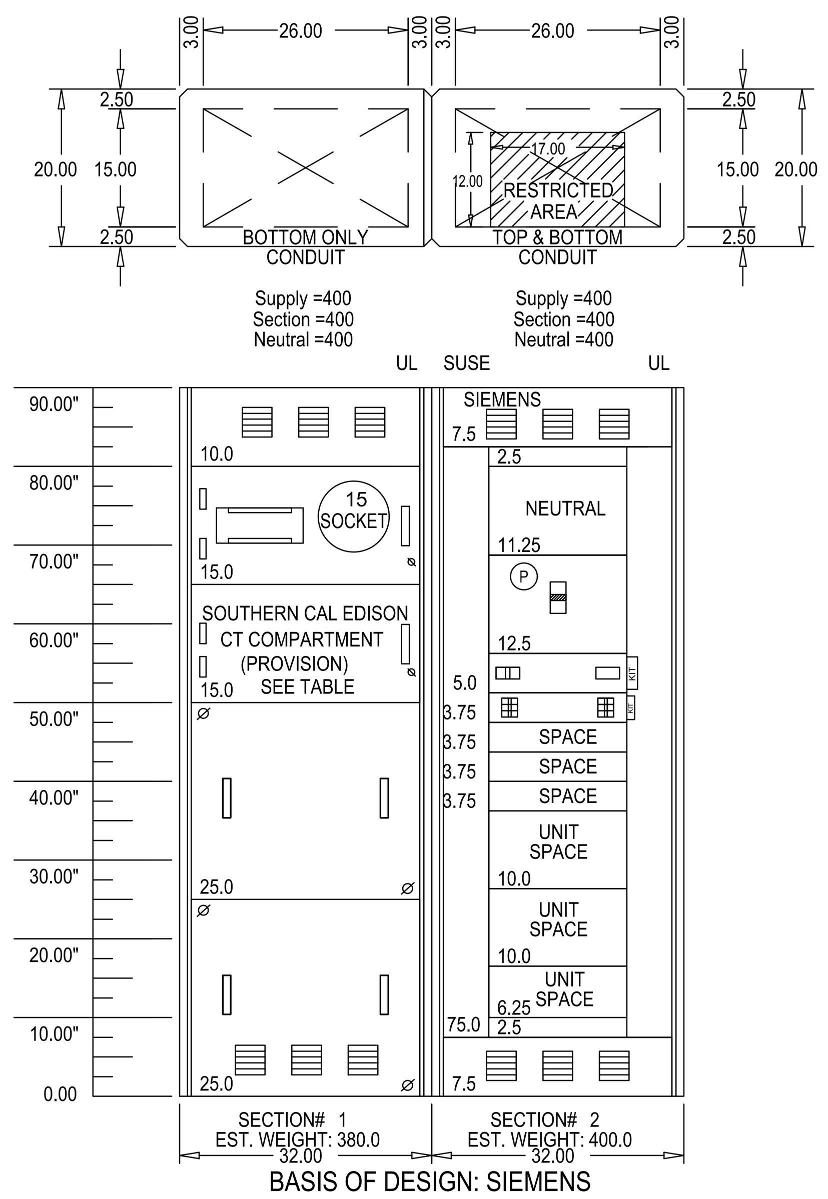
1. EMERGENCY LIGHTING BATTERY INVERTER SYSTEM. 2.8 KVA, 277V INPUT - 277V OUTPUT. (5) 20 AMP-1 POLE (NORMALLY ON) OUTPUT CIRCUIT BREAKERS. MYERS #4-EM4-S-BDA205-2YW OR APPROVED EQUAL.
2. TO UFER GROUND BUS. SEE DETAIL 1/E0.03.
3. PANEL PROVIDED AND INSTALLED BY POOL EQUIPMENT CONTRACTOR.
4. SWITCH AND FUSE SIZE PER ELEVATOR MANUFACTURERS REQUIREMENTS. PROVIDE NORMALLY OPEN AUXILIARY CONTACT FOR CONNECTION TO ELEVATOR CONTROLLER.
5. CONNECT SHUNT TRIP BREAKER RELAY COIL TO FIRE ALARM SYSTEM.
6. SHUNT TRIP CIRCUIT BREAKER. CIRCUIT BREAKER TO OPEN WHEN ELEVATOR MACHINE ROOM OR ELEVATOR SHAFT HEAT DETECTOR IS ACTIVATED.
7. PROVIDE EQUIPMENT GROUND CONDUCTORS. THE CONDUIT SHALL NOT BE USED AS THE SOLE GROUNDING MEANS.
8. (2) 2"C.O. CAP & MARK 12" ABOVE ROOF DECK AND MAKE WEATHERPROOF.
9. PANEL SHALL BE RATED FOR SERVICE ENTRANCE USE.
10. 3/4"C.-2#12, 1#12 GRD.



NOTES:

1. GROUNDING ELECTRODE SYSTEM CEC 250.50: ALL GROUNDING ELECTRODES AS DESCRIBED IN CEC 250.52(A)(1) THROUGH 250.52(A)(7)THAT ARE PRESENT AT EACH BUILDING OR STRUCTURE SERVED SHALL BE BONDED TOGETHER TO FORM A GROUNDING ELECTRODE SYSTEM.
2. BONDING CONDUCTIVE MATERIALS CEC 250.104: METAL WATER PIPING SYSTEMS, METAL SPRINKLER PIPING, METAL GAS PIPING, AND OTHER METAL PIPING SYSTEMS, AS WELL AS EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE CONNECTED TO ELECTRICAL SUPPLY SOURCE WITH APPROPRIATELY SIZED BONDING JUMPER PER CEC 250.102 (C)(1).
3. GROUNDING ELECTRODE SHALL BE LOCATED AS CLOSE AS POSSIBLE TO SERVICE ENTRANCE PANEL "L2"

POOL BUILDING GROUND ELECTRODE DETAIL (3)
SCALE: NONE



SWITCHBOARD "MSB" ELEVATION (3)
SCALE: NONE

SINGLE LINE DIAGRAM GENERAL NOTES

1. THE ELECTRICAL DISTRIBUTION EQUIPMENT SHALL BE FULLY RATED FOR 65 K A.I.C.
2. PROVIDE SHORT CIRCUIT PROTECTIVE DEVICE COORDINATION AND ARC-FLASH STUDY INCLUDING THE ENGINEERED SETTINGS FOR EACH FUSE AND ADJUSTABLE CIRCUIT BREAKER SHOWING THE CORRECT TIME AND CURRENT SETTINGS TO PROVIDE COORDINATION WITHIN THE LIMITS OF THE SPECIFIED EQUIPMENT. REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. THE BASIS OF DESIGN AND DIMENSIONS USED FOR SWITCHBOARDS/METER BANKS ARE BASED UPON SIEMENS MANUFACTURED PRODUCTS. IF ANOTHER MANUFACTURES PRODUCT IS FURNISHED, CONTRACTOR SHALL INSURE THAT THE PRODUCT WILL FIT WITHIN THE SPACE PROVIDED.
4. PROVIDE EQUIPMENT GROUND CONDUCTOR IN ELEVATOR FEEDER. THE CONDUIT SHALL NO BE USED AS THE SOLE GROUNDING MEANS.

NOTE: PROVIDE FIELD MARKING PER NEC 110.24.

SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD WITH THE MAXIMUM AVAILABLE FAULT CURRENT. THE FIELD MARKING(S) SHALL INCLUDE THE DATE THE FAULT CURRENT CALCULATION WAS PERFORMED AND BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED.

FIELD MARKING EXAMPLE:

WARNING

Maximum available fault current:
30,000 Symmetrical RMS Amperes
Date: **//22**

AVAILABLE FAULT CURRENT FIELD MARKING DETAIL (4)
SCALE: NONE

FEEDER SCHEDULE

COPPER CONDUCTORS THW 600V (AWG)

FEEDER TYPE	CONDUIT SIZE (QUANTITY) QUAN.	CONDUIT SIZE (QUANTITY) SIZE	CONDUCTORS IN EACH CONDUIT PHASE/NEUTRAL QUAN.	CONDUCTORS IN EACH CONDUIT PHASE/NEUTRAL SIZE	EQUIPMENT GROUND WIRE SIZE
F20	1	3/4"	4	12	12
F30	1	3/4"	4	10	10
F40	1	1"	4	8	10
F50	1	1 1/4"	4	6	10
F60	1	1 1/2"	4	4	10
F70	1	1 1/2"	4	4	8
F80	1	2"	4	2	8
F90	1	2"	4	2	8
F100	1	2"	4	1	8
F110	1	2"	4	1	6
F125	1	2"	4	1/0	6
F150	1	2"	4	1/0	6
F175	1	2"	4	2/0	6
F200	1	2 1/2"	4	3/0	6
F225	1	3"	4	4/0	4
F250	1	3"	4	250MCM	4
F275	1	4"	4	350MCM	4
F300	1	4"	4	350MCM	4
F350	1	4"	4	500MCM	2
F400	2	2 1/2"	4	3/0	2
F500	2	3"	4	250MCM	2
F600	2	4"	4	350MCM	1
F700	2	4"	4	500MCM	1/0
F800	3	4"	4	350MCM	1/0
F900	3	4"	4	350MCM	2/0
F1000	3	4"	4	500MCM	2/0
F1200	4	4"	4	350MCM	3/0
F1600	5	4"	4	500MCM	4/0
F2000	6	4"	4	500MCM	250MCM
F2500	7	4"	4	500MCM	350MCM
F3000	8	4"	4	500MCM	500MCM
F4000	11	4"	4	500MCM	500MCM
F20/N	1	3/4"	3	12	12
F30/N	1	3/4"	3	10	10
F40/N	1	1"	3	8	10
F50/N	1	1"	3	6	10
F60/N	1	1 1/4"	3	4	10
F70/N	1	1 1/4"	3	4	8
F80/N	1	1 1/4"	3	2	8
F90/N	1	1 1/4"	3	2	8
F100/N	1	1 1/2"	3	1	8
F110/N	1	1 1/2"	3	1	6
F125/N	1	2"	3	1/0	6
F150/N	1	2"	3	1/0	6
F175/N	1	2"	3	2/0	6
F200/N	1	2"	3	3/0	6
F225/N	1	2 1/2"	3	4/0	4
F250/N	1	2 1/2"	3	250MCM	4
F275/N	1	3"	3	350MCM	4
F300/N	1	3"	3	350MCM	4
F350/N	1	4"	3	500MCM	2
F400/N	2	2"	3	3/0	2
F450/N	2	2 1/2"	3	4/0	2
F500/N	2	2 1/2"	3	250MCM	2
F600/N	2	3"	3	350MCM	1
F700/N	2	4"	3	500MCM	1/0
F800/N	3	3"	3	350MCM	1/0
F900/N	3	3"	3	350MCM	2/0

FBA Engineering / Plot Date: 9/29/2022 8:24 AM / Plotted by: Steve Roth / Drawing Location: I:\535\050\E-0.03_535050.dwg

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Consulting Electrical Engineers
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Costa Mesa, CA 92626
949.852.9995 • 949.852.1657 (fax)
fbaengr.com
FBA Job Number: 535050

REGISTERED PROFESSIONAL ENGINEER STEPHEN R. ... No. E 10372 Exp. 09-30-22 ELECTRICAL STATE OF CALIFORNIA

CITY OF GARDENA FREEWAY CITY INCORPORATED 1930

PREPARED BY:
RJM DESIGN GROUP
31591 Camino Capistrano
San Juan Capistrano, CA 92675
www.RJMdesigngroup.com
[949] 493-2690 fax
[949] 493-2600 phone

LICENSED LANDSCAPE ARCHITECT LARRY P. RYAN LICENSE NO. 2502
Signature
09/30/2023 Renewal Date
9/29/2022 Date
STATE OF CALIFORNIA

REVISIONS

NO.	DESCRIPTION	DATE	APPROVED

B.M.: THE CITY OF GARDENA BENCHMARK NO. 5D-15 ELEV. = 43.508'

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING

SINGLE LINE DIAGRAM

COMMUNITY AQUATICS & SENIOR CENTER

E-0.03

	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	BZ	05/25/2022

APPROVED BY:

DATE DIRECTOR OF PUBLIC WORKS

SHT. 129 OF 157 DWG. NO. ______

FILE PATH: I:\535\050\E-0.03_535050.DWG
PLOT TIME: 9/29/2022 8:24:28 AM
FILE PATH: I:\535\050\E-0.03_535050.DWG, PLOT TIME: 9/29/2022 8:24:28 AM

GARDENA AQUATIC CENTER — PROJECT NO. 535050

VOLTS 277/480 — PANELBOARD L2 — MAIN 300A-3P
PHASE 3PH, 4W — BUS 400A
MTG SURFACE — LOCATION POOL EQUIP. ELECT. RM.

CKT	A	B	C	LOAD TYPE	BKR	OUTLET QUAN	DESCRIPTION		CKT	A	B	C	LOAD TYPE	BKR	OUTLET QUAN	DESCRIPTION
1		-----	-----		20/1			A	2		-----	-----		20/1		
3	-----		-----		20/1			B	4	-----		-----		20/1		
5	-----	-----			20/1			C	6	-----	-----			20/1		
7		-----	-----		20/1		SPARE	A	8		-----	-----		20/1		
9	-----		-----		20/1		SPARE	B	10	-----		-----		20/1		
11	-----	-----			20/1		SPARE	C	12	-----	-----			20/3		
13		-----	-----				PROVISION	A	14		-----	-----		-		
15	-----		-----				PROVISION	B	16	-----		-----		-		
17	-----	-----					PROVISION	C	18	-----	-----					
19		-----	-----				PROVISION	A	20		-----	-----				
21	-----		-----				PROVISION	B	22	-----		-----				
23	-----	-----					PROVISION	C	24	-----	-----					
25		-----	-----				PROVISION	A	26		-----	-----		30/3	1	
27	-----		-----				PROVISION	B	28	-----		-----		-	-	----
29	-----	-----					PROVISION	C	30	-----	-----			-	-	----
31		-----	-----				PROVISION	A	32		-----	-----		30/3	1	
33	-----		-----				PROVISION	B	34	-----		-----		-	-	----
35	-----	-----					PROVISION	C	36	-----	-----			-	-	----
37		-----	-----		200/3	1	POOL PANEL PL1	A	38		-----	-----		70/3	1	XFMR T-P2
39	-----		-----		-	-	(SUBFEED)	B	40	-----		-----		-	-	(SUBFEED)
41	-----	-----			-	-	----	C	42	-----	-----			-	-	----

CONNECTED: VA AMPS
PHASE A =
PHASE B =
PHASE C =
TOTAL =

L.C.L. @ 125% =
RECEPT. (> 10 kVA @ 50%) =
KITCHEN @ 65% =
OTHER LOAD @ 100% =
TOTAL VA =
TOTAL AMPS =

LOAD TYPE:
G - GENERAL (100%) M - MOTOR (100%)
L - L.C.L. (125%) M1 - MOTOR (125%)
R - RECEPTACLE (50%) (10 kVA @ 100%) X - X-RAY (100%)
K - KITCHEN (65%) X1 - X-RAY (50%)

GARDENA AQUATIC CENTER — PROJECT NO. 535050

VOLTS 277/480 — PANELBOARD L1 — MAIN L.O.
PHASE 3PH, 4W — BUS 225A
MTG SURFACE — LOCATION ELECT. RM.

CKT	A	B	C	LOAD TYPE	BKR	OUTLET QUAN	DESCRIPTION		CKT	A	B	C	LOAD TYPE	BKR	OUTLET QUAN	DESCRIPTION
1		-----	-----		20/1			A	2		-----	-----		20/1		
3	-----		-----		20/1			B	4	-----		-----		20/1		
5	-----	-----			20/1			C	6	-----	-----			20/1		
7		-----	-----		20/1		SPARE	A	8		-----	-----		20/1		
9	-----		-----		20/1		SPARE	B	10	-----		-----		20/1		
11	-----	-----			20/1		SPARE	C	12	-----	-----			20/3		
13		-----	-----				PROVISION	A	14		-----	-----		-		
15	-----		-----				PROVISION	B	16	-----		-----		-		
17	-----	-----					PROVISION	C	18	-----	-----					
19		-----	-----				PROVISION	A	20		-----	-----				
21	-----		-----				PROVISION	B	22	-----		-----				
23	-----	-----					PROVISION	C	24	-----	-----					
25		-----	-----				PROVISION	A	26		-----	-----		30/3	1	
27	-----		-----				PROVISION	B	28	-----		-----		-	-	----
29	-----	-----					PROVISION	C	30	-----	-----			-	-	----
31		-----	-----				PROVISION	A	32		-----	-----		30/3	1	
33	-----		-----				PROVISION	B	34	-----		-----		-	-	----
35	-----	-----					PROVISION	C	36	-----	-----			-	-	----
37		-----	-----				PROVISION	A	38		-----	-----		20/3	1	Battery Inv. INV
39	-----		-----				PROVISION	B	40	-----		-----		-	-	----
41	-----	-----						C	42	-----	-----			-	-	----

CONNECTED: VA AMPS
PHASE A =
PHASE B =
PHASE C =
TOTAL =

L.C.L. @ 125% =
RECEPT. (> 10 kVA @ 50%) =
KITCHEN @ 65% =
OTHER LOAD @ 100% =
TOTAL VA =
TOTAL AMPS =

LOAD TYPE:
G - GENERAL (100%) M - MOTOR (100%)
L - L.C.L. (125%) M1 - MOTOR (125%)
R - RECEPTACLE (50%) (10 kVA @ 100%) X - X-RAY (100%)
K - KITCHEN (65%) X1 - X-RAY (50%)

GARDENA AQUATIC CENTER — PROJECT NO. 535050

VOLTS 120/208 — PANELBOARD P2 — MAIN 175A-3P
PHASE 3PH, 4W — BUS 225A
MTG SURFACE — LOCATION POOL EQUIP. ELECT. RM.

CKT	A	B	C	LOAD TYPE	BKR	OUTLET QUAN	DESCRIPTION		CKT	A	B	C	LOAD TYPE	BKR	OUTLET QUAN	DESCRIPTION
1		-----	-----		20/1			A	2		-----	-----		40/2		
3	-----		-----		20/1			B	4	-----		-----		-		----
5	-----	-----			20/1			C	6	-----	-----			20/1		
7		-----	-----		20/1			A	8		-----	-----		20/1		
9	-----		-----		20/1			B	10	-----		-----		20/1		
11	-----	-----			20/1			C	12	-----	-----			20/1		
13		-----	-----		20/1			A	14		-----	-----		20/1		
15	-----		-----		20/1			B	16	-----		-----		20/1		
17	-----	-----			20/3	1		C	18	-----	-----			20/1		
19		-----	-----		-	-	----	A	20		-----	-----		20/1		
21	-----		-----		-	-	----	B	22	-----		-----		20/1		
23	-----	-----			20/1			C	24	-----	-----			20/1		
25		-----	-----		20/1			A	26		-----	-----		20/1		
27	-----		-----		30/2	1		B	28	-----		-----		20/1		
29	-----	-----			-	-	----	C	30	-----	-----			20/1		
31		-----	-----		20/2	1		A	32		-----	-----		20/1		
33	-----		-----		-	-	----	B	34	-----		-----		20/1		
35	-----	-----			30/2	1		C	36	-----	-----			20/1		
37		-----	-----		-	-	----	A	38		-----	-----		125/3	1	POOL PANEL "PP1"
39	-----		-----		30/2	1		B	40	-----		-----		-	-	----
41	-----	-----			-	-	----	C	42	-----	-----			-	-	----

CONNECTED: VA AMPS
PHASE A =
PHASE B =
PHASE C =
TOTAL =

L.C.L. @ 125% =
RECEPT. (> 10 kVA @ 50%) =
KITCHEN @ 65% =
OTHER LOAD @ 100% =
TOTAL VA =
TOTAL AMPS =

LOAD TYPE:
G - GENERAL (100%) M - MOTOR (100%)
L - L.C.L. (125%) M1 - MOTOR (125%)
R - RECEPTACLE (50%) (10 kVA @ 100%) X - X-RAY (100%)
K - KITCHEN (65%) X1 - X-RAY (50%)

GARDENA AQUATIC CENTER — PROJECT NO. 535050

VOLTS 120/208 — PANELBOARD P1 — MAIN 400A-3P
PHASE 3PH, 4W — BUS 400A
MTG SURFACE — LOCATION ELECT. RM.

CKT	A	B	C	LOAD TYPE	BKR	OUTLET QUAN	DESCRIPTION		CKT	A	B	C	LOAD TYPE	BKR	OUTLET QUAN	DESCRIPTION
1		-----	-----		20/1			A	2		-----	-----		20/1		
3	-----		-----		20/1			B	4	-----		-----		20/1		
5	-----	-----			20/1			C	6	-----	-----			20/1		
7		-----	-----		20/1			A	8		-----	-----		20/1		
9	-----		-----		20/1			B	10	-----		-----		20/1		
11	-----	-----			20/1			C	12	-----	-----			20/1		
13		-----	-----		20/1			A	14		-----	-----		20/1		
15	-----		-----		20/1			B	16	-----		-----		20/1		
17	-----	-----			20/1			C	18	-----	-----			20/1		
19		-----	-----		20/1			A	20		-----	-----		20/1		
21	-----		-----		20/1			B	22	-----		-----		20/1		
23	-----	-----			20/1			C	24	-----	-----			20/1		
25		-----	-----		20/1			A	26		-----	-----		20/1		
27	-----		-----		20/1			B	28	-----		-----		20/1		
29	-----	-----			20/1			C	30	-----	-----			20/1		
31		-----	-----		20/1			A	32		-----	-----		20/1		
33	-----		-----		20/1			B	34	-----		-----		20/1		
35	-----	-----			20/1			C	36	-----	-----			20/1		
37		-----	-----		125/3	1	PANEL "P1A"	A	38		-----	-----				
39	-----		-----		-	-	(SUBFEED)	B	40	-----		-----				
41	-----	-----			-	-	----	C	42	-----	-----					

CONNECTED: VA AMPS
PHASE A =
PHASE B =
PHASE C =
TOTAL =

L.C.L. @ 125% =
RECEPT. (> 10 kVA @ 50%) =
KITCHEN @ 65% =
OTHER LOAD @ 100% =
TOTAL VA =
TOTAL AMPS =

LOAD TYPE:
G - GENERAL (100%) M - MOTOR (100%)
L - L.C.L. (125%) M1 - MOTOR (125%)
R - RECEPTACLE (50%) (10 kVA @ 100%) X - X-RAY (100%)
K - KITCHEN (65%) X1 - X-RAY (50%)

EMERGENCY BATTERY INVERTER

CIRC. NO.	OUTLETS	VOLT AMPS	AMP	POLE	REMARKS
1			20	1	
2			20	1	
3			20	1	
4			20	1	
5			20	1	
6			20	1	SPARE
7			20	1	SPARE
8			20	1	SPARE
9			20	1	SPARE
10			20	1	SPARE

TOTAL 0 WATTS x 1.25 LCL = 0 WATTS

INV1	NAME
SUB ELEC. RM.	LOCATION
277	VOLTAGE
2800	VA

GARDENA AQUATIC CENTER — PROJECT NO. 535050

VOLTS 120/208 — PANELBOARD P1A — MAIN L.O.
PHASE 3PH, 4W — BUS 125A
MTG SURFACE — LOCATION ELECT. RM.

CKT	A	B	C	LOAD TYPE	BKR	OUTLET QUAN	DESCRIPTION		CKT	A	B	C	LOAD TYPE	BKR	OUTLET QUAN	DESCRIPTION
1		-----	-----		20/1			A	2		-----	-----		20/1		
3	-----		-----		20/1			B	4	-----		-----		20/1		
5	-----	-----			20/1			C	6	-----	-----			20/1		
7		-----	-----		20/1			A	8		-----	-----		20/1		
9	-----		-----		20/1			B	10	-----		-----		20/1		
11	-----	-----			20/1			C	12	-----	-----			20/1		
13		-----	-----		20/1			A	14		-----	-----		20/1		
15	-----		-----		20/1			B	16	-----		-----		20/1		
17	-----	-----			20/1			C	18	-----	-----			20/1		
19		-----	-----		20/1			A	20		-----	-----		20/1		
21	-----		-----		20/1			B	22	-----		-----		20/1		
23	-----	-----			20/1			C	24	-----	-----			20/1		
25		-----	-----		20/1			A	26		-----	-----		20/1		
27	-----		-----		20/1			B	28	-----		-----		20/1		
29	-----	-----			20/1			C	30	-----	-----			20/1		
31		-----	-----		20/1			A	32		-----	-----		20/1		
33	-----		-----		20/1			B	34	-----		-----		20/1		
35	-----	-----			20/1			C	36	-----	-----			20/1		
37		-----	-----		20/3	1		A	38		-----	-----				
39	-----		-----		-	-	----	B	40	-----		-----				
41	-----	-----			-	-	----	C	42	-----	-----					

CONNECTED: VA AMPS
PHASE A =
PHASE B =
PHASE C =
TOTAL =

L.C.L. @ 125% =
RECEPT. (> 10 kVA @ 50%) =
KITCHEN @ 65% =
OTHER LOAD @ 100% =
TOTAL VA =
TOTAL AMPS =

LOAD TYPE:
G - GENERAL (100%) M - MOTOR (100%)
L - L.C.L. (125%) M1 - MOTOR (125%)
R - RECEPTACLE (50%) (10 kVA @ 100%) X - X-RAY (100%)
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EMERGENCY BATTERY INVERTER

CIRC. NO.	OUTLETS	VOLT AMPS	AMP	POLE	REMARKS
1			20	1	
2			20	1	
3			20	1	
4			20	1	
5			20	1	SPARE
6			20	1	SPARE
7			20	1	SPARE
8			20	1	SPARE
9			20	1	SPARE
10			20	1	SPARE

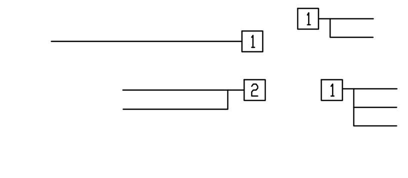
TOTAL 0 WATTS x 1.25 LCL = 0 WATTS

INV2	NAME
SUB ELEC. RM.	LOCATION
277	VOLTAGE
2800	VA

PANEL SCHEDULE NOTES:

1 ROUTE CIRCUIT THROUGH DESIGNATED RELAY IN LIGHTING CONTROL PANEL "LCP". REFER TO "LCP" SCHEDULE ON E0.02A.

2 PROVIDE RED CIRCUIT BREAKER AND LOCK-ON DEVICE.



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Consulting Electrical Engineers
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Costa Mesa, CA 92626
949.852.9995 • 949.852.1657 (fax)
fbaengr.com
FBA Job Number: 535050

REGISTERED PROFESSIONAL ENGINEER STEVEN R. ... No. E 10372 Exp. 09-30-22 ELECTRICAL STATE OF CALIFORNIA

CITY OF GARDENA FREEWAY CITY INCORPORATED 1930

PREPARED BY:
RJM DESIGN GROUP
31591 Camino Capistrano
San Juan Capistrano, CA 92675
www.RJMdesigngroup.com
[949] 493-2690 fax
[949] 493-2600 phone

LICENSED LANDSCAPE ARCHITECT LARRY P. RYAN LICENSE NO. 2502 STATE OF CALIFORNIA
Signature
09/30/2023 Renewal Date
9/29/2022 Date

REVISIONS

NO.	DESCRIPTION	DATE	APPROVED

B.M.: THE CITY OF GARDENA BENCHMARK NO. 5D-15 ELEV. = 43.508'

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING

PANEL SCHEDULES

COMMUNITY AQUATICS & SENIOR CENTER

E-0.04

	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	BZ	05/25/2022

APPROVED BY:
DATE DIRECTOR OF PUBLIC WORKS

SHT. 130 OF 157 DWG. NO.

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
This document is used to demonstrate compliance with requirements in §110.9, §110.12(c), §130.0, §130.1, §140.6 and §141.0(b)2 for indoor lighting scopes using the prescriptive path.			
Project Name:	Community Aquatics & Senior Center	**Report Page:**	**(Page 1 of 8)**
Project Address:	1700 W. 162nd St.	**Date Prepared:**	9/15/2022

A. GENERAL INFORMATION

01	Project Location (city)	Gardena	04	Total Conditioned Floor Area (ft²)	9,892
02	Climate Zone	8	05	Total Unconditioned Floor Area (ft²)	94
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

● Classroom ● Convention Center ● Office ● Support Areas ● : See Table I

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)2 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☒ New Lighting System	Area Category Method	9892	Area Category Method	94
☐ New Lighting System - Parking Garage				
Total Area of Work (ft²)	9892		94	

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1	Allowed Lighting Power per §140.6(b) (Watts)							Adjusted Lighting Power per §140.6(a) (Watts)					Compliance Results
	01	02	03	04		05		06	07		08		09
	Complete Building §140.6(c)1	Area Category §140.6(c)2	Area Category Additional §140.6(c)2G (+)	Tailored §140.6(c)3 (+)	=	**Total Allowed** (Watts)	≥	Total Designed (Watts)	Adjustments: PAF Lighting Control Credits §140.6(a)2 (-)	=	**Total Adjusted** (Watts) *Includes Adjustments		**05 must be >= 08** §140.6
	(See Table I)	(See Table I)	(See Table J)	(See Table K)				(See Table F)	(See Table P)				
Conditioned		6,618.4	0		=	6,618	≥	6,366	0	=	6366		COMPLIES
Unconditioned		56.4	0		=	56	≥	40	0	=	40		COMPLIES

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	Community Aquatics & Senior Center	**Report Page:**	**(Page 2 of 8)**
Project Address:	1700 W. 162nd St.	**Date Prepared:**	9/15/2022

C. COMPLIANCE RESULTS

Controls Compliance (See Table H for Details)	COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)	

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all permanent designed lighting and all portable lighting in offices.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per §140.6(a)3	Design Watts	Field Inspector Pass	Fail
F1	38w LED Recessed Direct/Indirect 2x4, 3500K	No	No	38	Mfr. Spec	18	No	684	☐	☐
F1A	59w LED recessed Direct/Indirect 2x4 Fixture, 3500K	No	No	59	Mfr. Spec	12	No	708	☐	☐
F2	30w LED Recessed Prismatic 2x4, 2500K	No	No	30	Mfr. Spec	3	No	90	☐	☐
F3	20w LED Recessed 4" Aperture Downlight, 3500K	No	No	20	Mfr. Spec	59	No	1,180	☐	☐
F4	42w LED 48" Pendant, Lensed Strip, 3500K	No	No	42	Mfr. Spec	11	No	462	☐	☐
F4A	42w LED 48" Surface Mounted, Lensed Strip Light, 3500K	No	No	42	Mfr. Spec	6	No	252	☐	☐

STATE OF CALIFORNIA
Indoor Lighting
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CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	Community Aquatics & Senior Center	**Report Page:**	**(Page 3 of 8)**
Project Address:	1700 W. 162nd St.	**Date Prepared:**	9/15/2022

F. INDOOR LIGHTING FIXTURE SCHEDULE

F5	50w LED Surface Wrap 1x4 Nominal, 3500K	No	No	50	Mfr. Spec	5	No	250	☐	☐
F6	150w LED 12' Linear Direct-Indirect Pendant Fixture. 2"W x 4"H White Finish, 3500K	No	No	150	Mfr. Spec	12	No	1,800	☐	☐
F7	60w LED Surface Mounted Vapor Tight 4' Fixture. Corrosion Resistant. Integral Exterior Occupancy Sensor.	No	No	60	Mfr. Spec	10	No	600	☐	☐
F8	68w LED Decorative Pendant Fixture, 48" Dia.	No	No	68	Mfr. Spec	5	No	340	☐	☐
							Total Designed Watts: CONDITIONED SPACES	6,366		

Designed Wattage: Unconditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per §140.6(a)3	Design Watts	Field Inspector Pass	Fail
F3	20w LED Recessed 4" Aperture Downlight, 3500K	No	No	20	Mfr. Spec	2	No	40	☐	☐
							Total Designed Watts: UNCONDITIONED SPACES	40		

[1]FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per §140.6(a)4B is adjusted to be 75% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.

[2]Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c) Wattage used must be the maximum rated for the luminaire, not the lamp.

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	Community Aquatics & Senior Center	**Report Page:**	**(Page 4 of 8)**
Project Address:	1700 W. 162nd St.	**Date Prepared:**	9/15/2022

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

*This table includes lighting controls for conditioned and unconditioned spaces. When a control having a * is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Building Level Controls

01	02	03	
Mandatory Demand Response §110.12(c)	Shut-off controls §130.1(c)	Field Inspector Pass	Fail
Required > 10,000 SF	Whole Building Auto Time Switch	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Skylit Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)1	Field Inspector Pass	Fail

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)2

13 — Plan Sheet Showing Daylit Zones:

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per §140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used .

Conditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment: Area Category	PAF
Food Prep Area First Floor	Kitchen/ Food Preparation Area	0.95	538	511.1	No	No
Electrical Room First Floor	Electrical Mechancial Telephone Room	0.4	304	121.6	No	No
Storage First Floor	All Other Space Types	0.4	181	72.4	No	No
Office First Floor	Office 250 square feet or less	0.7	217	151.9	No	No

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	Community Aquatics & Senior Center	**Report Page:**	**(Page 5 of 8)**
Project Address:	1700 W. 162nd St.	**Date Prepared:**	9/15/2022

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Conference First Floor	Convention, Conference, Multipurpose and Meeting Center Areas	0.85	174	147.9	No	No
Multipurpose First Floor	Convention, Conference, Multipurpose and Meeting Center Areas	0.85	1,339	1,138.1	No	No
Lobby First Floor	Main Entry Lobby	0.85	849	721.6	No	No
Locker Room First Floor	Locker Dressing Room	0.45	51	23	No	No
Misc First Floor	All Other Space Types	0.4	268	107.2	No	No
Storage Second Floor	All Other Space Types	0.4	229	91.6	No	No
Classroom Second Floor	Classroom, Lecture, or Training Vocational Area	0.7	2,810	1,967	No	No
Misc Second Floor	All Other Space Types	0.4	18	7.2	No	No
Electrical Room Second Floor	Electrical Mechancial Telephone Room	0.4	22	8.8	No	No
Corridor Second Floor	Corridor Area	0.6	1,461	876.6	No	No
Lounge Second Floor	Lounge Breakroom or Waiting Area	0.65	400	260	No	No
Electrical/Mechanical Pool Building	Electrical Mechancial Telephone Room	0.4	520	208	No	No
Storage Pool Building	All Other Space Types	0.4	511	204.4	No	No
		TOTALS:	9,892	6,618.4	See Tables J, or P for detail	

Unconditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment: Area Category	PAF
Corridor First Floor	Corridor Area	0.6	94	56.4	No	No
		TOTALS:	94	56.4	See Tables J, or P for detail	

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
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CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	Community Aquatics & Senior Center	**Report Page:**	**(Page 6 of 8)**
Project Address:	1700 W. 162nd St.	**Date Prepared:**	9/15/2022

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
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CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	Community Aquatics & Senior Center	**Report Page:**	**(Page 7 of 8)**
Project Address:	1700 W. 162nd St.	**Date Prepared:**	9/15/2022

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector Pass	Fail
NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified	Field Inspector Pass	Fail
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	☐	☐	
NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	☐	☐	

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTI-E
Project Name:	Community Aquatics & Senior Center	**Report Page:**	**(Page 8 of 8)**
Project Address:	1700 W. 162nd St.	**Date Prepared:**	9/15/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Steve Zajicek	Documentation Author Signature:
Company: FBA Engineering	Signature Date: 2022-09-15
Address: 150 Paularino Avenue Suite A120	CEA/ HERS Certification Identification (if applicable): E10372
City/State/Zip: Costa Meas CA 92626	Phone: 9498529995

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

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

Responsible Designer Name: Stephen R. Zajicek, P.E.	Responsible Designer Signature:
Company: FBA Engineering	Date Signed: 2022-09-15
Address: 150 Paularino Ave., Suite A120	License: E10372
City/State/Zip: Costa Mesa CA 92626	Phone: 949-852-9995

FBA Engineering / Plot Date: 9/29/2022 8:24 AM / Plotted by: Steve Roth / Drawing Location: I:\535\050\E-0.05_535050.dwg

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Consulting Electrical Engineers
150 Paularino Avenue Suite A120
Costa Mesa, CA 92626
949.852.9995 • 949.852.1657 (fax)
fbaengr.com
FBA Job Number: 535050

REGISTERED PROFESSIONAL ENGINEER — STEPHEN R. ZAJICEK — No. E 10372 — Exp. 09-30-22 — ELECTRICAL — STATE OF CALIFORNIA

CITY OF GARDENA — FREEWAY CITY — INCORPORATED 1930

PREPARED BY:
RJM DESIGN GROUP
31591 Camino Capistrano
San Juan Capistrano, CA 92675
www.RJMdesigngroup.com
[949] 493-2690 fax
[949] 493-2600 phone

LICENSED LANDSCAPE ARCHITECT — LARRY P. RYAN LICENSE NO. 2502 — Signature — 09/30/2023 Renewal Date — 9/29/2022 Date — STATE OF CALIFORNIA

REVISIONS			
NO.	DESCRIPTION	DATE	APPROVED

B.M.: THE CITY OF GARDENA BENCHMARK NO. 5D-15
ELEV. = 43.508'

	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	BZ	05/25/2022

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING
TITLE 24 - INDOOR
COMMUNITY AQUATICS & SENIOR CENTER
E-0.05

APPROVED BY:
DATE DIRECTOR OF PUBLIC WORKS
SHT. 131 OF 157 DWG. NO.

FILE PATH: I:\535\050\E-0.05_535050.DWG, PLOT TIME: 9/29/2022 8:24:33 AM

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	Community Aquatics & Senior Center	**Report Page:**	**(Page 1 of 6)**
Project Address:	1700 W. 162nd St.	**Date Prepared:**	9/15/2022

A. GENERAL INFORMATION

01	Project Location (city)	Gardena	04	Total Illuminated Hardscape Area (ft^2)	19703
02	Climate Zone	8			
03	Outdoor Lighting Zone per Title 24 Part 1 §10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐	LZ-0: Very Low - Undeveloped Parkland	☐ LZ-2: Moderate - Rural Areas	☐	LZ-4: High - Must be reviewed by CA Energy Commission for Approval	
☐	LZ-1: Low - Developed Parkland	☒ LZ-3: Moderately High - Urban Areas			

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2L for alterations.

My Project Consists of:

01	02	
☒ New Lighting System	Must Comply with Allowances from §140.7	
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ○ Yes ○ No	
03	04	05
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method
☐ < 10% ☐ >= 10% and < 50% ☐ >= 50%		

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	Community Aquatics & Senior Center	**Report Page:**	**(Page 2 of 6)**
Project Address:	1700 W. 162nd St.	**Date Prepared:**	9/15/2022

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through I. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2L														Compliance Results			
01		02		03		04		05		06		07		08		09	
General Hardscape Allowance §140.7(d)1 (See Table I)	+	Per Application §140.7(d)2 (See Table J)	+	Sales Frontage §140.7(d)2 (See Table K)	+	Ornamental §140.7(d)2 (See Table L)	+	Per Specific Area §140.7(d)2 (See Table M)	OR	Existing Power Allowance §141.0(b)2L (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)		**07 must be >= 08**	
1,344.69	+	---	+	---	+	---	+	---	OR	---	=	1,344.69	≥	1,261.3		COMPLIES	
Cutoff Compliance (See Table G for Details)												N/A					
Controls Compliance (See Table H for Details)												COMPLIES					

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	Community Aquatics & Senior Center	**Report Page:**	**(Page 3 of 6)**
Project Address:	1700 W. 162nd St.	**Date Prepared:**	9/15/2022

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with §140.7 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included).

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1, 2]	How is Wattage determined	Total number luminaires[2]	Luminaire Status[3]	Excluded per §140.7(a)	Design Watts	Cutoff Req. > 6,200 initial lumen output §130.2(b)[4]	Field Inspector Pass	Fail
S1	23w LED Wall Mounted Wedge Fixture. Dark Bronze Finish.	☐ Linear	22.5	Mfr. Spec	8	New	☐	180	NA: < 6200 lumens	☐	☐
S2	LED Low Voltage Bullet Fixture Mounted To Palm Tree Via Tree Ring.	☐ Linear	12.3	Mfr. Spec	45	New	☐	553.5	NA: < 6200 lumens	☐	☐
S3	73w LED Pedestrian Pole Fixture On Concrete Pole Base.	☐ Linear	73	Mfr. Spec	7	New	☐	511	NA: < 6200 lumens	☐	☐
S4	8.4w LED Compact Adjustable Accent Light.	☐ Linear	8.4	Mfr. Spec	2	New	☐	16.8	NA: < 6200 lumens	☐	☐
							Total Design Watts:	1261.3			

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

[1] FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)
[2] For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.
[3] Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.
[4] Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by §130.2(b)

G. CUTOFF REQUIREMENTS (BUG)

This section does not apply to this project.

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	Community Aquatics & Senior Center	**Report Page:**	**(Page 4 of 6)**
Project Address:	1700 W. 162nd St.	**Date Prepared:**	9/15/2022

H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
*When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Mandatory Controls

01	02	03	04	05	
Area Description	Shut-Off §130.2(c)1	Auto-Schedule §130.2(c)2	Motion Sensor §130.2(c)3	Field Inspector Pass	Fail

** NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.*
EX: Not permitted by health & safety to be turned off; EXCEPTION 1 to §130.2(c)

I. LIGHTING POWER ALLOWANCE (per §140.7)

This table includes areas using allowance calculations per §140.7. General Hardscape Allowance is per Table 140.7-A while "Use it or lose it" Allowances are per Table 140.7-B . Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.

01				
☒ General Hardscape Allowance Table I (below)	"Use it or lose it" Allowance (select all that apply) (select all that apply)			
	☐ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A (LZ 0, 1 & 4)

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A (LZ 2 & 3)

02	03	04	05	06	07	08	9	10
		Area Wattage Allowance (AWA)			Area Wattage Allowance (AWA)			
Area Description	Surface Type	Illuminated Area (ft^2)	Allowed Density (W/ft^2)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	Total General AWA + LWA (Watts)
Pedestrian Hardscape	Concrete	19703	0.03	591.1	1009	0.4	403.6	995
							Initial Wattage Allowance for Entire Site (Watts):	350
							Total General Hardscape Allowance (Watts):	1345

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	Community Aquatics & Senior Center	**Report Page:**	**(Page 5 of 6)**
Project Address:	1700 W. 162nd St.	**Date Prepared:**	9/15/2022

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector Pass	Fail
NRCI-LTO-01-E - Must be submitted for all buildings	☐	☐

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	Community Aquatics & Senior Center	**Report Page:**	**(Page 6 of 6)**
Project Address:	1700 W. 162nd St.	**Date Prepared:**	9/15/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Steve Zajicek	Documentation Author Signature:
Company: FBA Engineering	Signature Date: 2022-09-15
Address: 150 Paularino Avenue Suite A120	CEA/ HERS Certification Identification (if applicable): E10372
City/State/Zip: Costa Meas CA 92626	Phone: 9498529995

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

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

Responsible Designer Name: Stephen R. Zajicek, P.E.	Responsible Designer Signature:
Company: FBA Engineering	Date Signed: 2022-09-15
Address: 150 Paularino Ave., Suite A120	License: E10372
City/State/Zip: Costa Mesa CA 92626	Phone: 949-852-9995

FBA Engineering / Plot Date: 9/29/2022 8:24 AM / Plotted by: Steve Roth / Drawing Location: I:\535\050\E-0.06_535050.dwg

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FBA Engineering
Consulting Electrical Engineers
150 Paularino Avenue Suite A120
Costa Mesa, CA 92626
949.852.9995 • 949.852.1657 (fax)
fbaengr.com
FBA Job Number: 535050

REGISTERED PROFESSIONAL ENGINEER STEPHEN R. ZAJICEK No. E 10372 Exp. 09-30-22 ELECTRICAL STATE OF CALIFORNIA

CITY OF GARDENA FREEWAY CITY INCORPORATED 1930

PREPARED BY:
RJM DESIGN GROUP
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San Juan Capistrano, CA 92675
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[949] 493-2690 fax
[949] 493-2600 phone

LICENSED LANDSCAPE ARCHITECT LARRY P. RYAN LICENSE NO. 2502 Signature 09/30/2023 Renewal Date 9/29/2022 Date STATE OF CALIFORNIA

REVISIONS			
NO.	DESCRIPTION	DATE	APPROVED

B.M.: THE CITY OF GARDENA BENCHMARK NO. 5D-15 ELEV. = 43.508'

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING
TITLE 24 - OUTDOOR
COMMUNITY AQUATICS & SENIOR CENTER
E-0.06

	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	BZ	05/25/2022

APPROVED BY:
DATE DIRECTOR OF PUBLIC WORKS
SHT. 132 OF 157 DWG. NO. ____

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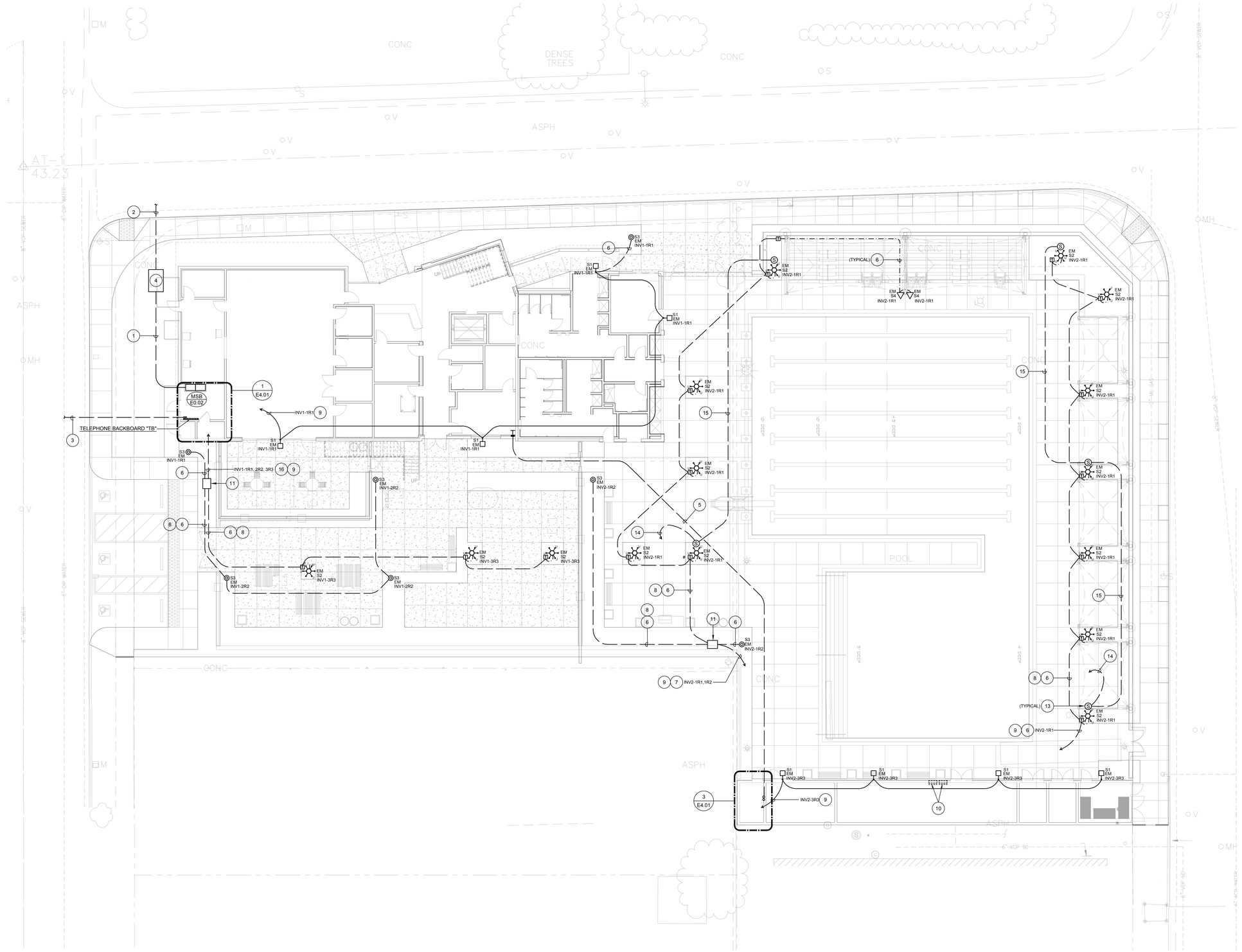

PLAN NOTES

1. (2) 5"C.O. (POWER COMPANY TRANSFORMER SECONDARY). COORDINATE EXACT REQUIREMENTS WITH DRY UTILITY PLANS.
2. (1) 5"C.O. (POWER COMPANY TRANSFORMER PRIMARY). COORDINATE EXACT REQUIREMENTS WITH DRY UTILITY PLANS.
3. (2) 2"C. (TELECOM.) COORDINATE EXACT LOCATION AND REQUIREMENTS WITH DRY UTILITY PLANS.
4. 4' X 6' TRANSFORMER SLAB BOX PER POWER COMPANY REQUIREMENTS. COORDINATE EXACT REQUIREMENTS WITH DRY UTILITY PLANS.
5. (2) 1 1/4"C.O. (TELECOM.). STUB UP INTO ACCESSIBLE CEILING SPACE OF BREAK ROOM AND +12" A.F.F. IN POOL BUILDING ELECTRICAL ROOM.
6. 3/4" C. - 2#12, 1#12 GRD.
7. 3/4" C. - 4#12, 1#12 GRD.
8. CONTINUE THROUGH REST OF BRANCH CIRCUIT RUN, UNLESS NOTED OTHERWISE.
9. ROUTE CIRCUIT THROUGH DESIGNATED RELAY IN DESIGNATED LIGHTING CONTROL PANEL (LCP#) SEE SCHEDULES ON E-0.02.
10. POOL PANELS "PL1 & PP1" PROVIDED & INSTALLED BY POOL EQUIPMENT CONTRACTOR. SEE E-0.03 FOR FEEDER REQUIREMENTS. COORDINATE EXACT LOCATION & REQUIREMENTS WITH POOL EQUIPMENT PLANS & SPECIFICATIONS.
11. PLACE CODE SIZED COMPOSITE PULLBOX IN PLANTER. LABEL "LIGHTING".
12. LOW VOLTAGE CABLING PER MANUFACTURER'S REQUIREMENTS.
13. 4S WEATHERPROOF J-BOX AT BASE OF TREE FOR SPEAKER CABLING. SEE DETAIL 3/E-4.01.
14. 1"C.O. (SPEAKER CABLING) TO TEL. BACKBOARD "TBP" IN POOL BUILDING.
15. 3/4"C.O. (SPEAKER CABLING).
16. 3/4"C.-6#12, 1#12 GRD.

SITE PLAN GENERAL NOTES:

1. LOCATIONS OF EXISTING UTILITIES ARE NOT SHOWN AND CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING DUCTS, PIPING, OR CONDUITS, ETC., AND TO PREVENT HAZARDS TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN AND INSTALLED BY ANY OTHER CONTRACTS. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES, WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY ANY OTHER CONTRACTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER. THE ENGINEER SHOULD SEARCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE NECESSARY ELEMENTS FOR CONSTRUCTION SAFETY.
2. CONTRACTOR SHALL VERIFY THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO COMMENCEMENT OF WORK BY CONTACTING UNDERGROUND SERVICE ALERT (U.S.A.) AT 1(800) 422-4133, OR OTHER LOCAL APPLICABLE UNDERGROUND SERVICE ALERT AGENCIES.
3. THE DRAWINGS ILLUSTRATE LOCATIONS OF EQUIPMENT AND ASSEMBLIES, PULLBOXES, MANHOLES, HANDHOLES, AND VAULTS, INCLUDING OTHER ELECTRICAL UNDERGROUND STRUCTURES AND PATHWAYS. CONTRACTOR SHALL CLOSELY COORDINATE EXACT LOCATIONS AND MOUNTING DEPTHS OF ALL DEVICES, STRUCTURES AND PATHWAYS WITH OTHER TRADES PRIOR TO PLACEMENT, TO ENSURE FINAL LOCATIONS ARE OUTSIDE FEATURE LANDSCAPE AND ARCHITECTURAL AREAS AND ARE NOT IN CONFLICT WITH THE INSTALLATION OF MATERIALS BY OTHER TRADES.
4. SEE ARCHITECTURAL, CIVIL AND LANDSCAPE PLANS FOR EXACT LOCATION OF FIXTURES, PULLBOXES, MANHOLES, OTHER ELECTRICAL EQUIPMENT AND DEVICES, ETC. COORDINATE ALL UNDERGROUND STRUCTURES AND CONDUIT ROUTING WITH ARCHITECT OR OWNERS' REPRESENTATIVE PRIOR TO ROUGH-IN, TO ENSURE SUCH ITEMS ARE NOT PLACED IN PLANTING / HARDSCAPE AREAS.
5. ALL EQUIPMENT LOCATED OUTDOORS SHALL BE WEATHERPROOF, NEMA 3R RATED.
6. ALL UNDERGROUND CONDUIT SIZE SHALL NOT BE LESS THAN ¾" - U.N.O.
7. MINIMUM CONDUCTOR SIZE SHALL BE #10 AWG. - U.N.O.
8. ALL SITE BRANCH CIRCUIT CONDUIT RUNS SHALL INCLUDE AN EQUIPMENT GROUND THAT AT A MINIMUM, MATCHES THE SIZE OF THE LARGEST BRANCH CIRCUIT CONDUCTOR.
9. PROVIDE PULL STRING IN ALL EMPTY CONDUITS.

SITE UTILITY GENERAL NOTES

1. UTILITY POINTS OF SERVICE AND WORK/MATERIAL SHOWN ARE BASED UPON PRELIMINARY INFORMATION ONLY BY THE UTILITY COMPANIES AND ARE FOR BID PURPOSES ONLY, NOT FOR CONSTRUCTION.
2. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY FOR FINAL AND EXACT WORK AND MATERIAL REQUIREMENTS AND CONSTRUCT TO UTILITY COMPANY ENGINEERING PLANS AND SPECIFICATIONS ONLY. CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT, PULL WIRES, CABLES, PULLBOXES, CONCRETE ENCASEMENT OF CONDUITS, TRANSFORMER PAD, BREAKERS, TRENCHING AND BACKFILL, AND PAY ALL UTILITY COMPANY FEES AND INCLUDE ALL REQUIREMENTS IN SCOPE OF WORK.
3. LOCATIONS OF UTILITIES WHERE SHOWN ARE APPROXIMATE AND CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON SITE TO AVOID EXISTING DUCTS, PIPING, OR CONDUITS, ETC. AND TO PREVENT HAZARD TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN AND INSTALLED BY ANY OTHER CONTRACTS. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY ANY OTHER CONTRACTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE NECESSARY ELEMENTS FOR CONSTRUCTION SAFETY.
4. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL LINE WORK SHOWN IS NEW.

SITE ELECTRICAL PLAN | SCALE: 3/32"=1'-0" | 1

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Consulting Electrical Engineers
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Costa Mesa, CA 92626
949.852.9995 • 949.852.1657 (fax)
fbaengr.com
FBA Job Number: 535050

REGISTERED PROFESSIONAL ENGINEER — STEVEN P. ROTH — No. 10372 — Exp. 09-30-22 — ELECTRICAL — STATE OF CALIFORNIA

CITY OF GARDENA — RAILWAY CITY — INCORPORATED 1930

PREPARED BY:
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31591 Camino Capistrano
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[949] 493-2600 phone

LICENSED LANDSCAPE ARCHITECT — Signature — 09-30-2022 Renewal Date — 9-29-2022 Date — STATE OF CALIFORNIA

REVISIONS

NO.	DESCRIPTION	DATE	APPROVED

B.M.: THE CITY OF GARDENA BENCHMARK NO. SD-15
ELEV. = 43.00'

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING

SITE ELECTRICAL PLAN

COMMUNITY AQUATICS & SENIOR CENTER

E-1.01

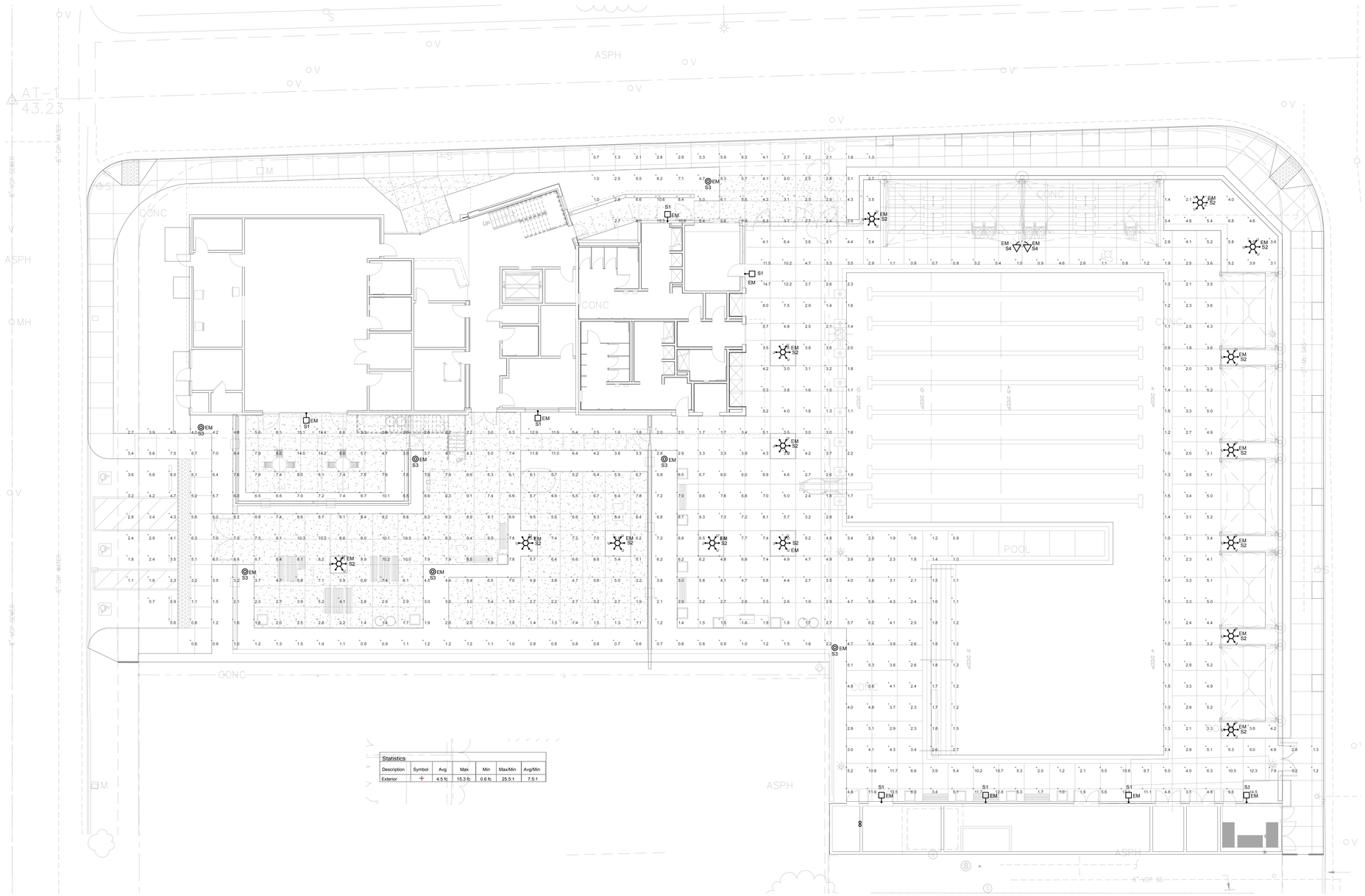
	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	RE	06/28/2022

APPROVED BY:
DATE
DIRECTOR OF PUBLIC WORKS

SHT. 133 OF 157 DWG. NO.

FILE PATH: I:\535\050\E-1.01_535050.DWG, PLOT TIME: 9/29/2022 8:24:51 AM

FBA Engineering / Plot Date: 9/29/2022 8:24 AM / Plotted by: Steve Roth / Drawing Location: I:\535\050\E-1.01_535050.dwg



Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Exterior	+	4.5 fc	15.3 fc	0.6 fc	25.5:1	7.5:1

SITE PHOTOMETRIC PLAN | SCALE: 3/32"=1'-0" | 1

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fbaengr.com
FBA Job Number: 535050

REGISTERED PROFESSIONAL ENGINEER 10372 Exp. 09-30-22 ELECTRICAL STATE OF CALIFORNIA

CITY OF GARDENA HIGHWAY OF INCORPORATED 1930

PREPARED BY:
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[949] 493-2600 phone

REGISTERED LANDSCAPE ARCHITECT
LAWRENCE RYAN LICENSE NO. 4190
REGISTRATION EXPIRES 01-31-2023
REGISTRATION EXPIRES 6-30-2022
STATE OF CALIFORNIA

REVISIONS

NO.	DESCRIPTION	DATE	APPROVED

B.M.: THE CITY OF GARDENA BENCHMARK NO. SD-15
ELEV. = 43.508'

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING

SITE PHOTOMETRIC PLAN

COMMUNITY AQUATICS & SENIOR CENTER
E-1.01A

	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	RZ	05/25/2022

APPROVED BY:
DATE
DIRECTOR OF PUBLIC WORKS

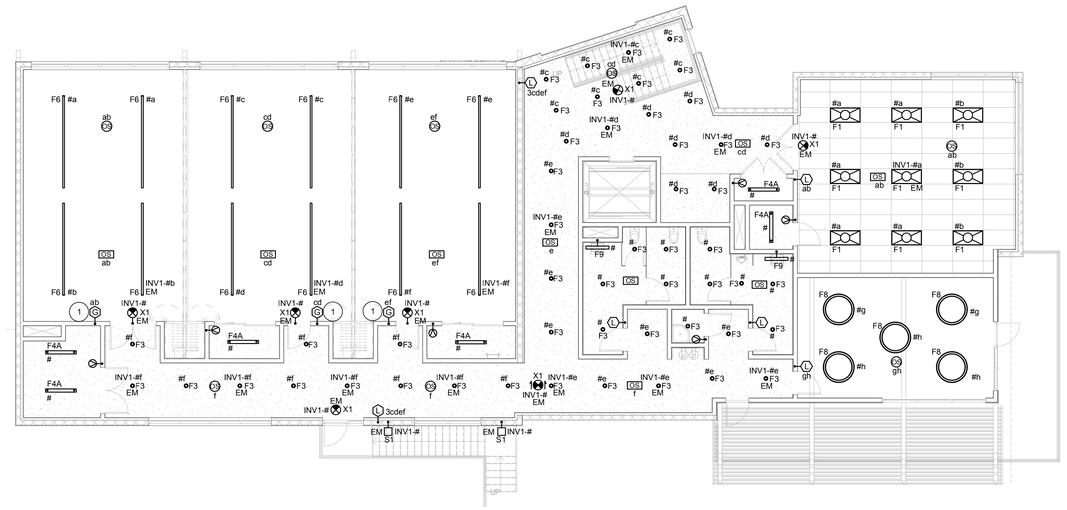
SHT. 134 OF 157 DWG. NO.

FILE PATH: I:\535\050\E-1.01_535050.DWG, PLOT TIME: 9/29/2022 8:24:52 AM

FBA Engineering / Plot Date: 9/29/2022 8:24 AM / Plotted by: Steve Roth / Drawing Location: I:\535\050\E-1.01_535050.dwg

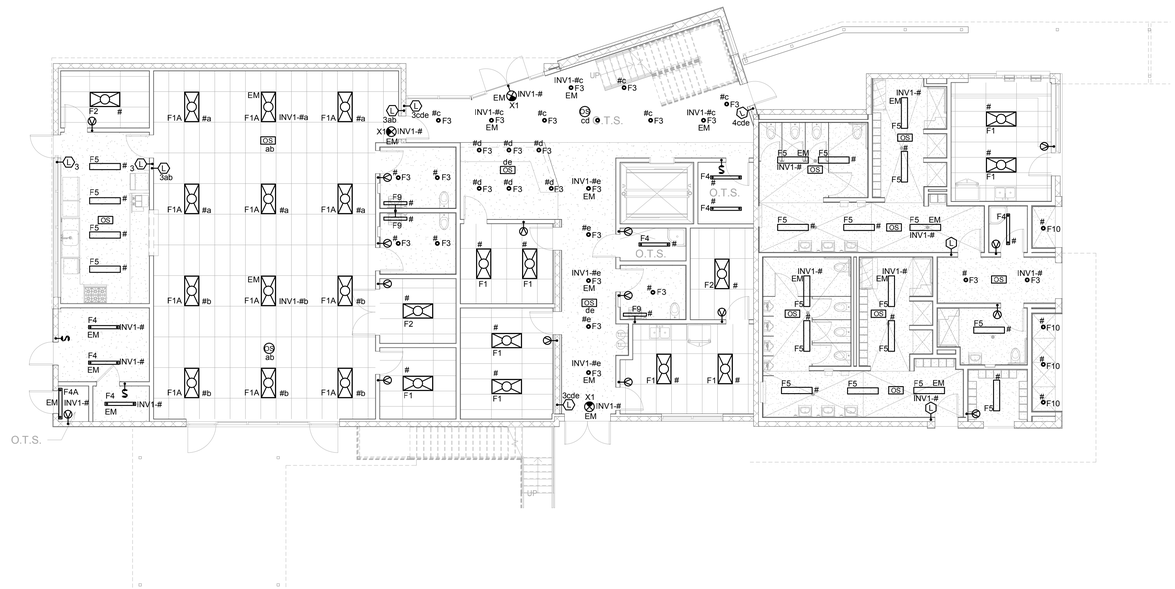
PLAN NOTES

1. PROVIDE PARTITION CONTROLS TO PROVIDE CONTROL OF SPACE ENTIRE SPACE DEPENDING ON MOVEABLE PARTITION POSITION. SEE DETAIL 1/E-0.02A FOR ADDITIONAL INFORMATION.
2.



SCALE: 1 inch = 8 ft.

BUILDING SECOND FLOOR LIGHTING PLAN | SCALE: 1/8"=1'-0" | 2



SCALE: 1 inch = 8 ft.

BUILDING FIRST FLOOR LIGHTING PLAN | SCALE: 1/8"=1'-0" | 1

GENERAL NOTES

1. REFER TO TYPICAL LIGHTING CONTROL DIAGRAMS & NOTES ON E0.02.
2. FOR CLARITY, BRANCH CIRCUIT CONDUIT & CONDUCTOR REQUIREMENTS HAVE NOT BEEN SHOWN ON PLANS FOR NORMAL & EMERGENCY LIGHTING. FOR LIGHTING THROUGHOUT ALL SPACES, PROVIDE CONDUIT AND CONDUCTORS IN ACCORDANCE WITH ELECTRICAL SPECIFICATION . PROVIDE #12 CONDUCTORS UNLESS SPECIFICALLY NOTED OTHERWISE.
3. FOR EMERGENCY LIGHTING "EM" POWER BRANCH CIRCUITS, PROVIDE CONDUIT AND CONDUCTORS, SEPARATE FROM NORMAL POWER LIGHTING BRANCH CIRCUIT CONDUIT & CONDUCTORS. REFER TO NOTE #2 ABOVE. EMERGENCY LIGHTING BRANCH CIRCUITS SHALL HAVE SEPARATE NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR, SHARED NEUTRAL IS NOT ALLOWED. PROVIDE A NON-CONTROLLED (NON-SWITCHED) HOT CONDUCTOR, FROM EMERGENCY POWER SOURCE, FOR CONNECTION TO EXIT SIGNS.

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FBA Job Number: 535050

REGISTERED PROFESSIONAL ENGINEER 10372 Exp. 09-30-22 ELECTRICAL STATE OF CALIFORNIA

CITY OF GARDENA INCORPORATED 1930

PREPARED BY:
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31591 Camino Capistrano
San Juan Capistrano, CA 92675
www.RJMdesigngroup.com
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(949) 493-2600 phone

LICENSED LANDSCAPE ARCHITECT — LANDSCAPE ARCHITECTURE — STATE OF CALIFORNIA

REVISIONS

NO.	DESCRIPTION	DATE	APPROVED

B.M.: THE CITY OF GARDENA BENCHMARK NO. 5D-15 ELEV. = 43.508'

	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	BZ	05/25/2022

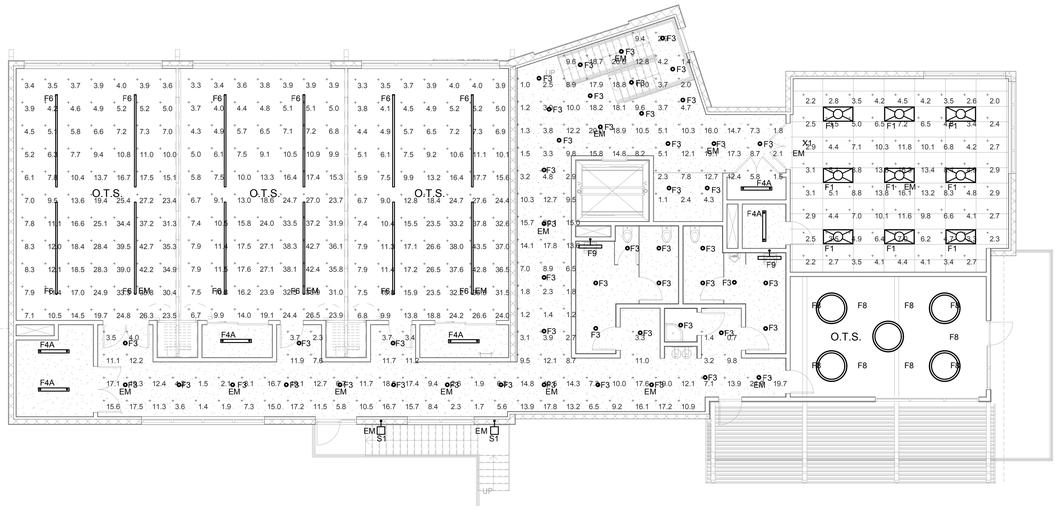
APPROVED BY:
DATE DIRECTOR OF PUBLIC WORKS

SHT. 135 OF 157 DWG. NO.

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING
BUILDING LIGHTING PLANS
COMMUNITY AQUATICS & SENIOR CENTER
E-2.01

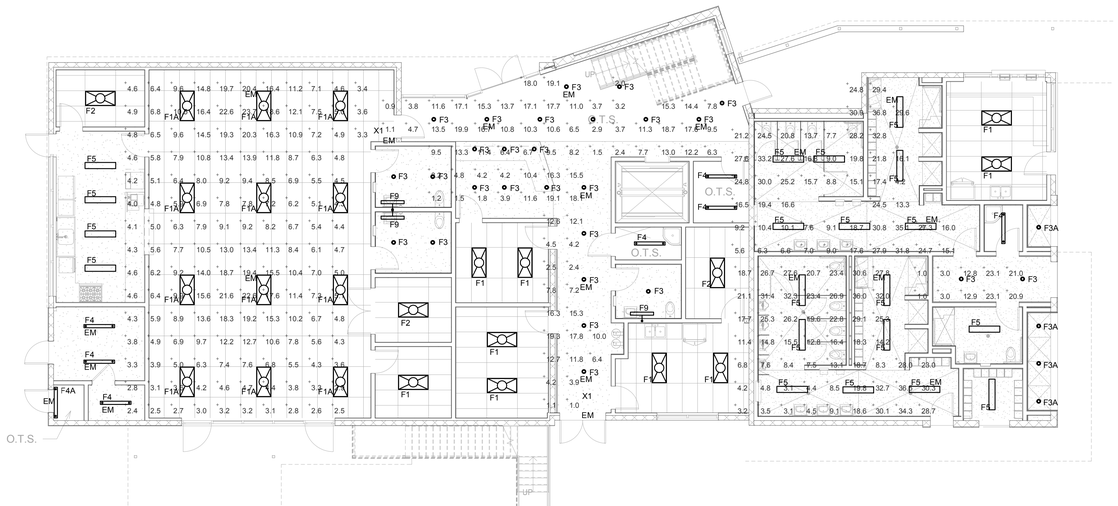
FILE PATH: I:\535\050\E-2.01_535050.DWG, PLOT TIME: 9/29/2022 8:24:56 AM

FBA Engineering / Plot Date: 9/29/2022 8:24 AM / Plotted by: Steve Roth / Drawing Location: I:\535\050\E-2.01_535050.dwg



SCALE: 1 inch = 8 ft.

BUILDING SECOND FLOOR EGRESS LIGHTING CALCULATION | SCALE: 1/8"=1'-0" | 2



SCALE: 1 inch = 8 ft.

BUILDING FIRST FLOOR EGRESS LIGHTING CALCULATION | SCALE: 1/8"=1'-0" | 1

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FBA Job Number: 535050

REGISTERED PROFESSIONAL ENGINEER 10372 Exp. 09-30-22 ELECTRICAL STATE OF CALIFORNIA

CITY OF GARDENA HIGHWAY CITY INCORPORATED 1930

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San Juan Capistrano, CA 92675
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(949) 493-2600 phone

LICENSED LANDSCAPE ARCHITECT
Expires 12/31/2022
Signature
05-26-2022
Date of Signature
STATE OF CALIFORNIA

REVISIONS

NO.	DESCRIPTION	DATE	APPROVED

B.M.: THE CITY OF GARDENA BENCHMARK NO. SD-15
ELEV. = 43.508'

	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	RZ	05/25/2022

APPROVED BY:
DATE DIRECTOR OF PUBLIC WORKS

SHT. 136 OF 157 DWG. NO.

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING
BUILDING EGRESS LIGHTING CALCULATIONS
COMMUNITY AQUATICS & SENIOR CENTER
E-2.01A

FILE PATH: I:\535\050\E-2.01_535050.DWG, PLOT TIME: 9/29/2022 8:24:57 AM

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PLOT TIME: 9/29/2022 8:24:57 AM
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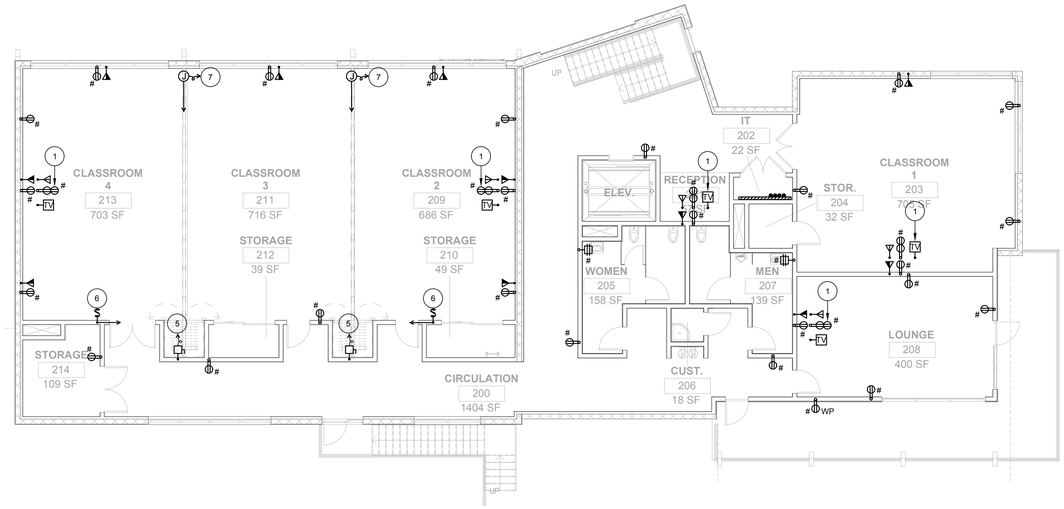
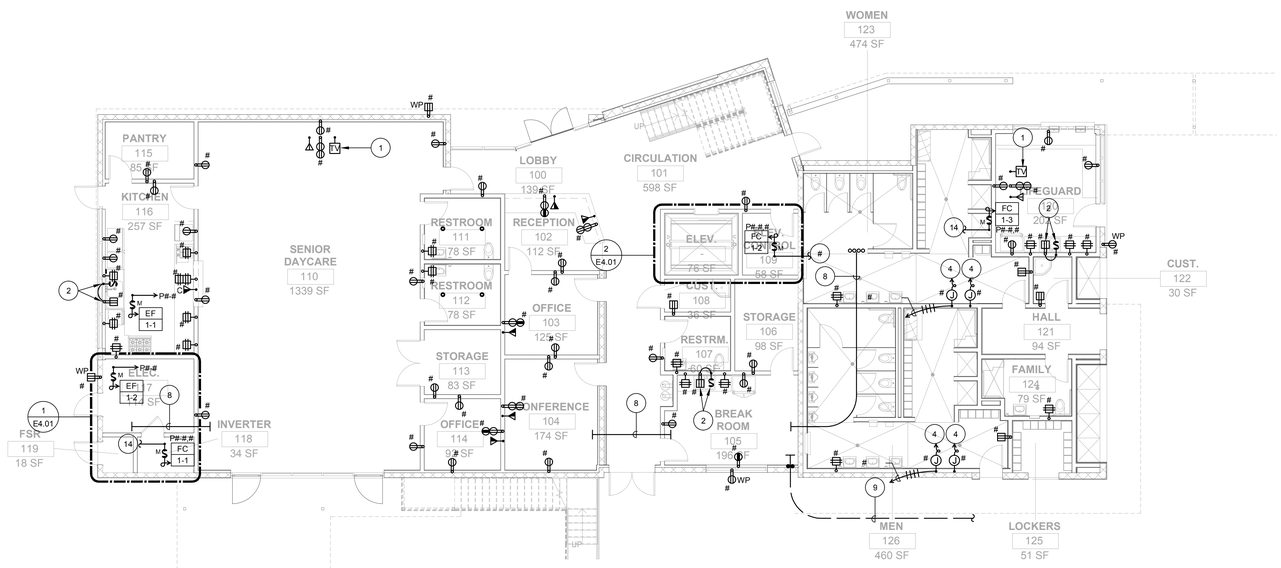


PLAN NOTES

1. OUTLETS FOR MONITOR . MOUNT +6'-0" AFF. COORDINATE EXACT LOCATION WITH ARCHITECT. TYPICAL FOR (3) DEVICES.
2. RECEPTACLE & SWITCH FOR GARBAGE DISPOSAL. MOUNT SWITCH +6" ABOVE COUNTER SPLASH. MOUNT RECEPTACLE UNDER SINK IN CABINET SPACE.
3. STUB INTO ACCESSIBLE CEILING SPACE.
4. CONNECT AS REQUIRED TO HAND DRYER. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH ARCHITECT.
5. CONNECT AS REQUIRED TO MOTORIZED PARTITION. PROVIDE WIRING AND CONNECTIONS AS REQUIRED PER MANUFACTURERS REQUIREMENTS FOR A COMPLETE AND OPERABLE PARTITION.
6. SWITCH FOR PARTITION CONTROL. PROVIDE WIRING AND CONNECTIONS AS REQUIRED. COORDINATE EXACT LCOATION WITH ARCHITECT.
7. PARTITION SYSTEM LIMIT SWITCH. PROVIDE WIRING AND CONNECTIONS AS REQUIRED PER MANUFACTURERS REQUIREMENTS FOR A COMPLETE AND OPERABLE PARTITION. PROVIDE 3/4"C. WITH WIRING AND CONNECTIONS AS REQUIRED TO PARTITION MOTOR.
8. (4) 2"C. (TELECOM.) STUB INTO ACCESSIBLE CEILING SPACE AND UP INTO 2nd FLOOR IT CLOSET.
9. (4) 1 1/4"C.O. (TELECOM.) TO POOL BUILDING. REFER TO NOTE #5 ON E-1.01 FOR CONTINUATION
10. 3/4"C. - 3#12,1#12 GRD.
11. 3/4"C. - 3#10, 1#10 GRD.
12. 3/4"C.-2#12,1#12 GRD.
13. TO RECEPTACLE CIRCUIT IN ROOM.
14. POWERED BY OUTDOOR UNIT ON ROOF. PROVIDE 3/4"C.-2#12,1#12 GRD. TO RESPECTIVE OUTDOOR INIT ON ROOF.
15. CONTROLLED BY LINE VOLTAGE T-STAT. COORDINATE EXACT LOCATION & REQUIREMENTS WITH MECHANICAL.
16. DDC CONTROL PANEL BY MECHANICAL. COORDINATE LOCATION & REQUIREMENTS WITH MECHANICAL.
17. PROVIDE POWER CONNECTION TO AUTO SENSOR FOR FAUCETS AND URINALS. PROVIDE 3/4"C.-2#12, 1#12 GRD. FROM RESTROOM RECEPTACLE CIRCUIT P1-#. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH PLUMBING.
18. RECEPTACLES FOR MICROWAVE BELOW COUNTER. COORDINATE EXACT LOCATION WITH ARCHITECT.

0 4 8 16
SCALE: 1 inch = 8 ft.

BUILDING SECOND FLOOR POWER & SIGNAL PLAN | SCALE: 1/8"=1'-0" | 2



0 4 8 16
SCALE: 1 inch = 8 ft.

BUILDING FIRST FLOOR POWER & SIGNAL PLAN | SCALE: 1/8"=1'-0" | 1

POWER & SIGNAL GENERAL NOTES:

1. ALL WALL MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH ARCHITECTURAL ROOM ELEVATIONS PRIOR TO ROUGH-IN.
2. PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED WITH AN APPROVED FIRE STOP SYSTEM EQUAL TO OR GREATER THAN THE RATING OF THE WALL BEING PENETRATED.
3. ALL DEVICES MOUNTED BACK-TO-BACK ON COMMON WALLS SHALL BE INSTALLED IN SEPARATE BOXES OFFSET 24-INCHES MINIMUM OR PROVIDED WITH PUTTY OR ANOTHER APPROVED SOUNDPROOF BACKING.
4. WHEN EXPOSED CEILING OR OPEN GRID CONDITIONS EXIST, CONTRACTOR SHALL PROVIDE:
   - A. ALL BRANCH CIRCUITS TO BE INSTALLED IN EMT.
   - B. ALL BRANCH CIRCUITS SHALL BE ROUTED PARALLEL TO BUILDING STRUCTURES AND RACKED NEATLY IN GROUPS OF MULTIPLE PATHWAYS.
   - C. ALL LOW VOLTAGE CABLES SHALL BE:
     1) INSTALLED IN EMT CONDUIT PATHWAYS OR
     2) INSTALLED NEATLY IN CABLE MANAGEMENT OPEN BASKET OR LADDER TYPE WIREWAY SUPPORTED INDEPENDENTLY FROM STRUCTURE ABOVE.

   EXPOSED LOW VOLTAGE CABLING IN OPEN TYPE CEILING APPLICATIONS INSTALLED ON D-RINGS, J-HOOKS OR SIMILAR APPARATUS WILL NOT BE ACCEPTED UNLESS APPROVED IN WRITING BY ARCHITECT/ENGINEER PRIOR TO ANY ROUGH-IN OR INSTALLATION. CONTRACTOR SHALL INCLUDE AN ALLOWANCE IN HIS BASE BID FOR THE INSTALLATION OF LOW VOLTAGE CABLES IN OPEN CEILING AS DESCRIBED.
5. EXPOSED CABLE/CONDUCTORS INSTALLED IN A PLENUM SPACE SHALL BE LISTED FOR SUCH ENVIRONMENT AND INSTALLATION SHALL CONFORM TO NEC OR CEC WHERE ADOPTED ARTICLE 300.22(C).
6. ALL RECEPTACLES MOUNTED AT 5-FEET-6-INCHES OR LOWER SHALL BE TAMPER-RESISTANT TYPE, EXCEPT RECEPTACLES FOR FIXED APPLIANCES AND/OR EQUIPMENT.
7. COORDINATE LOCATION OF ALL OUTLETS, RECEPTACLES, AND SWITCHES WITH ARCHITECT PRIOR TO ROUGH-IN.

CONTROLLED RECEPTACLE DETAIL

"#, #C — DUPLEX

"#, #C — DOUBLE DUPLEX

NOTE:

SUBSCRIPT / SUPERSCRIPT "#,#C" INDICATES SPLIT WIRED RECEPTACLE CONTROLLED BY ROOM'S LIGHTING CONTROLS. REFER TO LIGHTING CONTROL SYSTEM DIAGRAM ON SHEET E002A FOR ADDITIONAL REQUIREMENTS. CONTROLLED PORTION OF RECEPTACLE SHALL BE IMPRINTED "CONTROLLED". REFER TO SYMBOLS LIST FOR ADDITIONAL INFORMATION.

BRANCH CIRCUIT GENERAL NOTES

1. FOR CLARITY, SOME BRANCH CIRCUIT CONDUIT & CONDUCTOR REQUIREMENTS HAVE NOT BEEN SHOWN ON PLANS FOR POWER BRANCH CIRCUITS. FOR POWER THROUGHOUT ALL SPACES, PROVIDE CONDUIT AND CONDUCTORS IN ACCORDANCE WITH ELECTRICAL SPECIFICATIONS. PROVIDE #12 CONDUCTORS UNLESS SPECIFICALLY NOTED OTHERWISE.

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REGISTERED PROFESSIONAL ENGINEER — STEVEN C. ROTH — No. 10372 — Exp. 09-30-22 — ELECTRICAL — STATE OF CALIFORNIA

CITY OF GARDENA — INCORPORATED 1930

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LICENSED LANDSCAPE ARCHITECT — STATE OF CALIFORNIA — Signature — 09-30-2022 Renewal Date — 9-29-2022 Date

REVISIONS

NO.	DESCRIPTION	DATE	APPROVED

B.M.: THE CITY OF GARDENA BENCHMARK NO. SD-15 ELEV. = 43.508'

	INITAL	DATE
DESIGNED BY	SR	06/28/2022
DRAWN BY	SR	06/28/2022
CHECKED BY	RZ	06/28/2022

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING
BUILDING POWER & SIGNAL PLANS
COMMUNITY AQUATICS & SENIOR CENTER
E-3.01

APPROVED BY:
DATE — DIRECTOR OF PUBLIC WORKS

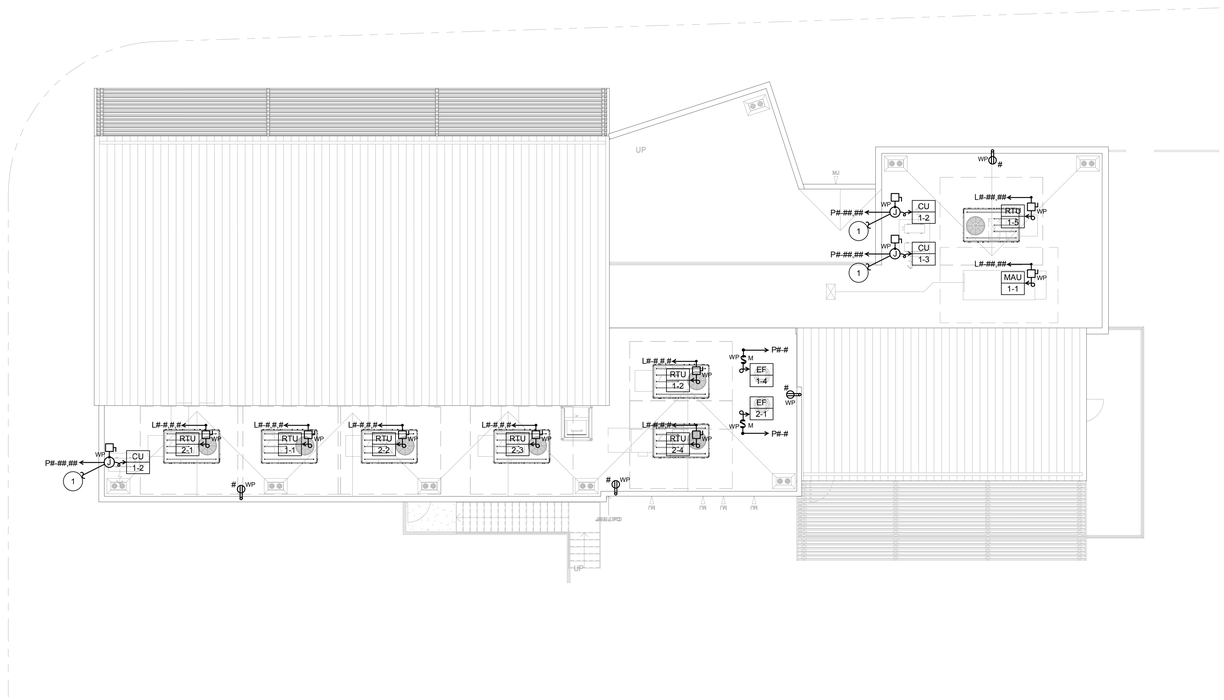
SHT. 137 OF 157 — DWG. NO.

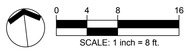
FILE PATH: I:\535\050\E-3.01_535050.DWG, PLOT TIME: 9/29/2022 8:25:00 AM

FBA Engineering / Plot Date: 9/29/2022 8:25 AM / Plotted by: Steve Roth / Drawing Location: I:\535\050\E-3.01_535050.dwg

PLAN NOTES

(1) TO RESPECTIVE INDOOR FANCOIL UNIT. SEE NOTE #8 ON E3.01 FOR CONTINUATION.





MECHANICAL EQUIPMENT GENERAL NOTES

1. VERIFY EXACT LOCATION OF MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION OF CONDUIT.
2. ALL EQUIPMENT, DEVICES, SAFETY SWITCH, JUNCTION BOXES CONNECTIONS, ETC. MOUNTED ON THE ROOF OR EXTERIOR SHALL BE WEATHERPROOF.
3. REFER TO MECHANICAL CONTROL DIAGRAMS FOR ALL SENSORS, TIME CLOCKS, RELAYS, TIMERS, STARTERS, LINE AND LOW VOLTAGE CONDUIT AND PROVIDE AS REQUIRED.
4. SAFETY SWITCHES SHALL BE HORSEPOWER RATED WITH CURRENT LIMITING FUSES, SIZED PER THE MANUFACTURER'S RECOMMENDATION. SWITCHES SHALL HAVE "RK-1" FUSE REJECTION CLIPS.
5. ELECTRICAL PLAN DO NOT INDICATE MECHANICAL AND PLUMBING EQUIPMENT CONTROL. REFER TO MECHANICAL AND PLUMBING PLANS AND SPECIFICATIONS AND PROVIDE ALL CONDUIT, WIRE, J-BOXES, OUTLET BOXES, RELAY SWITCHES, TIME SWITCHES, CONTROL CIRCUITS, ETC. REQUIRED FOR A COMPLETE AND OPERABLE MECHANICAL AND PLUMBING INSTALLATION. ALL WIRE SHALL BE INSTALLED IN CODE SIZED CONDUIT.
6. LOCATIONS OF SAFETY SWITCHES AND CONNECTIONS FOR MECHANICAL AND PLUMBING EQUIPMENT ARE SHOWN DIAGRAMMATICALLY. VERIFY ACTUAL LOCATIONS WITH EQUIPMENT SHOP DRAWINGS AND LOCATE SAFETY SWITCHES AS TO PROVIDE CODE REQUIRED CLEARANCES AND ACCESS. SAFETY SWITCHES LOCATED ON THE ROOF SHALL BE MOUNTED 30" MINIMUM ABOVE THE ROOF.

ROOF ELECTRICAL PLAN	SCALE: 1/4"=1'-0"	1

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REGISTERED PROFESSIONAL ENGINEER 10372 Exp. 09-30-22 ELECTRICAL STATE OF CALIFORNIA

CITY OF GARDENA INCORPORATED 1930

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LICENSED LANDSCAPE ARCHITECT — Signature — Date — Expiration Date — STATE OF CALIFORNIA

REVISIONS

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	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	BZ	05/25/2022

APPROVED BY:
DATE DIRECTOR OF PUBLIC WORKS

SHT. 138 OF 157 DWG. NO.

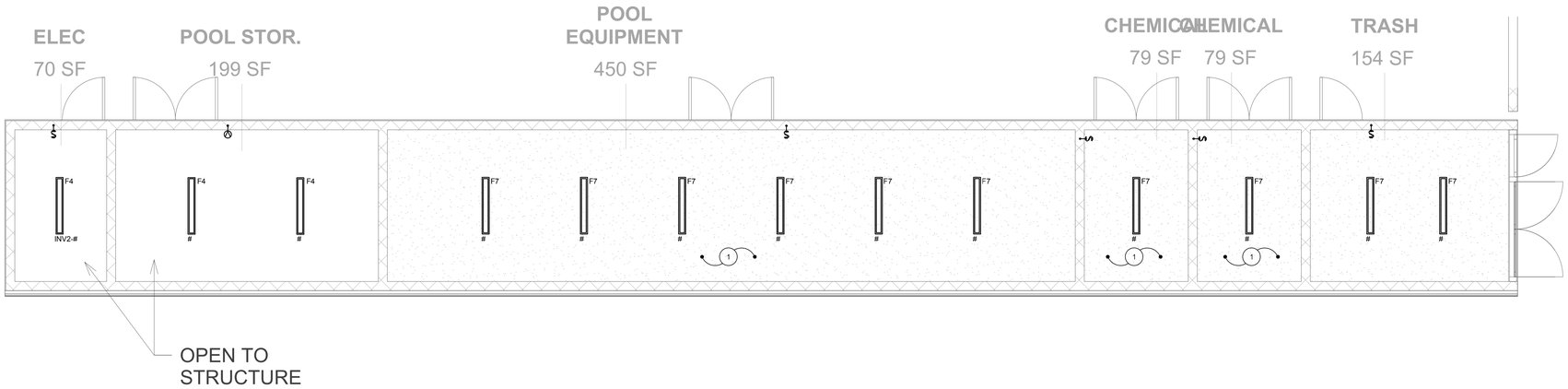
CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING
ROOF ELECTRICAL PLAN
COMMUNITY AQUATICS & SENIOR CENTER
E-3.02

FILE PATH: I:\535\050\E-3.02_535050.DWG, PLOT TIME: 9/29/2022 8:25:04 AM

FBA Engineering / Plot Date: 9/29/2022 8:25 AM / Plotted by: Steve Roth / Drawing Location: I:\535\050\E-3.02_535050.dwg

PLAN NOTES

1. ELECTRICAL INSTALLATION SHALL BE SUITABLE FOR A CORROSIVE ENVIRONMENT.
2.
3.
4.
5.

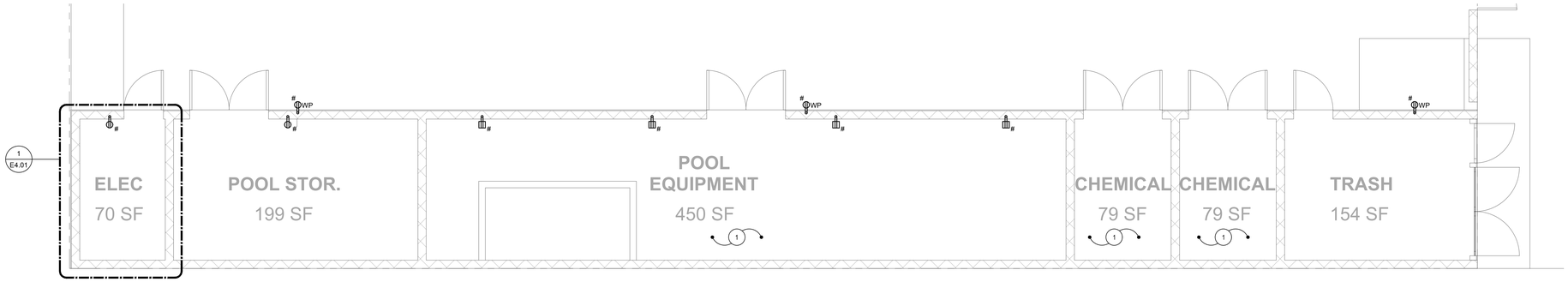


SCALE: 1 inch = 4 ft.

POOL BUILDING LIGHTING PLAN | SCALE: 1/4"=1'-0" | 2

GENERAL NOTES

1. REFER TO TYPICAL LIGHTING CONTROL DIAGRAMS & NOTES ON E0.02.
2. FOR CLARITY, BRANCH CIRCUIT CONDUIT & CONDUCTOR REQUIREMENTS HAVE NOT BEEN SHOWN ON PLANS FOR NORMAL & EMERGENCY LIGHTING. FOR LIGHTING THROUGHOUT ALL SPACES, PROVIDE CONDUIT AND CONDUCTORS IN ACCORDANCE WITH ELECTRICAL SPECIFICATION . PROVIDE #12 CONDUCTORS UNLESS SPECIFICALLY NOTED OTHERWISE.
3. FOR EMERGENCY LIGHTING "EM" POWER BRANCH CIRCUITS, PROVIDE CONDUIT AND CONDUCTORS, SEPARATE FROM NORMAL POWER LIGHTING BRANCH CIRCUIT CONDUIT & CONDUCTORS. REFER TO NOTE #2 ABOVE. EMERGENCY LIGHTING BRANCH CIRCUITS SHALL HAVE SEPARATE NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR, SHARED NEUTRAL IS NOT ALLOWED. PROVIDE A NON-CONTROLLED (NON-SWITCHED) HOT CONDUCTOR, FROM EMERGENCY POWER SOURCE, FOR CONNECTION TO EXIT SIGNS.



SCALE: 1 inch = 4 ft.

POOL BUILDING POWER & SIGNAL PLAN | SCALE: 1/4"=1'-0" | 1

POWER & SIGNAL GENERAL NOTES:

1. ALL WALL MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH ARCHITECTURAL ROOM ELEVATIONS PRIOR TO ROUGH-IN.
2. PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED WITH AN APPROVED FIRE STOP SYSTEM EQUAL TO OR GREATER THAN THE RATING OF THE WALL BEING PENETRATED.
3. ALL DEVICES MOUNTED BACK-TO-BACK ON COMMON WALLS SHALL BE INSTALLED IN SEPARATE BOXES OFFSET 24-INCHES MINIMUM OR PROVIDED WITH PUTTY OR ANOTHER APPROVED SOUNDPROOF BACKING.
4. WHEN EXPOSED CEILING OR OPEN GRID CONDITIONS EXIST, CONTRACTOR SHALL PROVIDE:
   - A. ALL BRANCH CIRCUITS TO BE INSTALLED IN EMT.
   - B. ALL BRANCH CIRCUITS SHALL BE ROUTED PARALLEL TO BUILDING STRUCTURES AND RACKED NEATLY IN GROUPS OF MULTIPLE PATHWAYS.
   - C. ALL LOW VOLTAGE CABLES SHALL BE:
     1) INSTALLED IN EMT CONDUIT PATHWAYS OR
     2) INSTALLED NEATLY IN CABLE MANAGEMENT OPEN BASKET OR LADDER TYPE WIREWAY SUPPORTED INDEPENDENTLY FROM STRUCTURE ABOVE.

   EXPOSED LOW VOLTAGE CABLING IN OPEN TYPE CEILING APPLICATIONS INSTALLED ON D-RINGS, J-HOOKS OR SIMILAR APPARATUS WILL NOT BE ACCEPTED UNLESS APPROVED IN WRITING BY ARCHITECT/ENGINEER PRIOR TO ANY ROUGH-IN OR INSTALLATION. CONTRACTOR SHALL INCLUDE AN ALLOWANCE IN HIS BASE BID FOR THE INSTALLATION OF LOW VOLTAGE CABLES IN OPEN CEILING AS DESCRIBED.
5. EXPOSED CABLE/CONDUCTORS INSTALLED IN A PLENUM SPACE SHALL BE LISTED FOR SUCH ENVIRONMENT AND INSTALLATION SHALL CONFORM TO NEC OR CEC WHERE ADOPTED ARTICLE 300.22(C).
6. ALL RECEPTACLES MOUNTED AT 5-FEET 6-INCHES OR LOWER SHALL BE TAMPER-RESISTANT TYPE, EXCEPT RECEPTACLES FOR FIXED APPLIANCES AND/OR EQUIPMENT.
7. COORDINATE LOCATION OF ALL OUTLETS, RECEPTACLES, AND SWITCHES WITH ARCHITECT PRIOR TO ROUGH-IN.

BRANCH CIRCUIT POWER GENERAL NOTES:

1. FOR CLARITY, SOME BRANCH CIRCUIT CONDUIT & CONDUCTOR REQUIREMENTS HAVE NOT BEEN SHOWN ON PLANS FOR POWER BRANCH CIRCUITS. FOR POWER THROUGHOUT ALL SPACES, PROVIDE CONDUIT AND CONDUCTORS IN ACCORDANCE WITH ELECTRICAL SPECIFICATIONS. PROVIDE #12 CONDUCTORS UNLESS SPECIFICALLY NOTED OTHERWISE.

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REGISTERED PROFESSIONAL ENGINEER
10372
Exp. 09-30-22
ELECTRICAL
STATE OF CALIFORNIA

CITY OF GARDENA
FREEWAY CITY
INCORPORATED 1930

PREPARED BY:
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[949] 493-2600 phone

LICENSED LANDSCAPE ARCHITECT
Signature
10-30-2022
Renewal Date
8-25-2022
Date
STATE OF CALIFORNIA

REVISIONS

NO.	DESCRIPTION	DATE	APPROVED

B.M.: THE CITY OF GARDENA BENCHMARK NO. 5D-15
ELEV. = 43.508'

	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	RE	05/25/2022

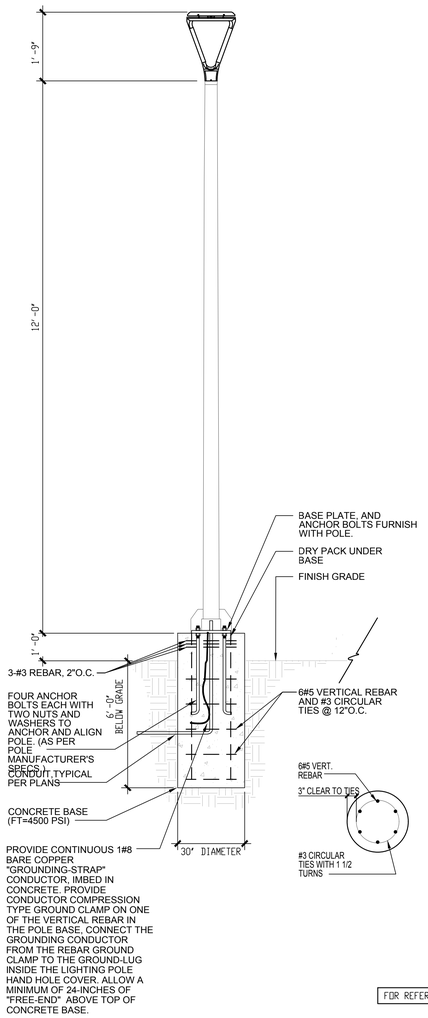
CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING
POOL BUILDING LIGHTING, POWER & SIGNAL PLANS
COMMUNITY AQUATICS & SENIOR CENTER
E-3.03

APPROVED BY:
DATE | DIRECTOR OF PUBLIC WORKS

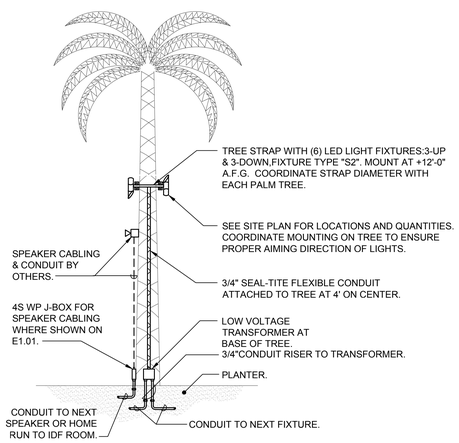
SHT. 139 OF 157 | DWG. NO.

FILE PATH: I:\535\050\E-3.03_535050.DWG, PLOT TIME: 9/29/2022 8:25:04 AM

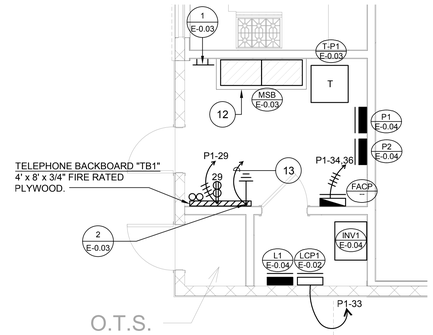
FBA Engineering / Plot Date: 9/29/2022 8:25 AM / Plotted by: Steve Roth / Drawing Location: I:\535\050\E-3.03_535050.dwg



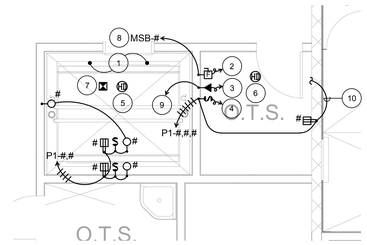
FIXTURE TYPE "S3" POLE BASE DETAIL	SCALE: NONE	6



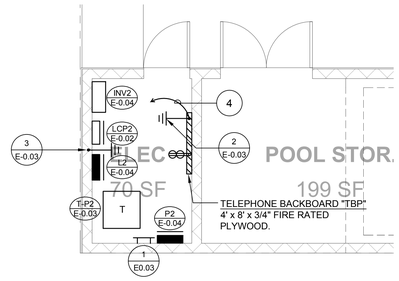
FIXTURE TYPE "S2" MOUNTING DETAIL	SCALE: NONE	5



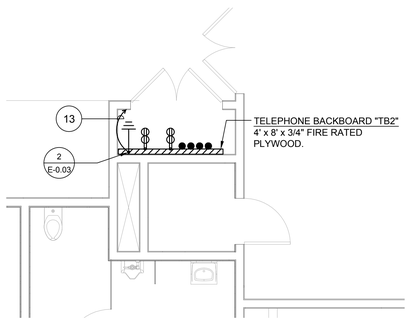
ENLARGED ELECTRICAL ROOM PLAN	SCALE: 1/4"=1'-0"	1



ENLARGED ELEVATOR DETAIL	SCALE: 1/4"=1'-0"	2



POOL BLDG. ENLARGED ELECTRICAL ROOM PLAN	SCALE: 1/4"=1'-0"	3



ENLARGED ELECTRICAL IT ROOM PLAN	SCALE: 1/4"=1'-0"	4

PLAN NOTES

1. LOCATE DEVICES IN ELEVATOR PIT/SHAFT PER ELEVATOR SUPPLIER REQUIREMENTS. LIGHT FIXTURE TO BE WALL MOUNTED, 2-FT, 4,000 LUMEN LED, VAPORTITE WITH HIGH IMPACT LENS AND WET LOCATION LISTED. METALUX #2VT2-LD5-4-DR-UNV-L840-CDI-WL OR EQUAL.
2. CONNECT TO ELEVATOR IN ACCORDANCE WITH THE ELEVATOR MANUFACTURER REQUIREMENTS. VERIFY EXACT LOCATION WITH ELEVATOR SUPPLIER.
3. CONNECT TO ELEVATOR FOR CAR EMERGENCY PHONE. VERIFY EXACT LOCATION WITH ELEVATOR SUPPLIER.
4. 120-VOLT, 20-AMP, SINGLE-PHASE, LOCKABLE, FUSED S.P.S.T. SWITCH FOR ELEVATOR CAR LIGHTS AND BLOWER WITH CONDUIT AND WIRE EXTENDED TO STUDS ON EACH ELEVATOR CONTROLLER. VERIFY EXACT LOCATION WITH ELEVATOR SUPPLIER.
5. HEAT DETECTOR IN ELEVATOR SHAFT LOCATED WITHIN 2'-0" PF SPRINKLER HEAD CONNECT TO FIRE ALARM SYSTEM AND TO SHUNT TRIP CIRCUIT BREAKER TO SHUT-OFF POWER TO ELEVATOR WHEN DETECTOR IS ACTIVATED. PROVIDE ACCESS FROM OUTSIDE SHAFT TO SERVICE DETECTOR.
6. HEAT DETECTOR IN ELEVATOR MACHINE ROOM LOCATED WITHIN 2'-0" OF EVERY SPRINKLER HEAD. VERIFY LOCATIONS AND QUANTITIES WITH FIRE PROTECTION DRAWINGS. CONNECT TO FIRE ALARM SYSTEM AND TO SHUNT TRIP CIRCUIT BREAKER TO SHUT-OFF POWER TO ELEVATOR WHEN DETECTOR IS ACTIVATED.
7. SMOKE DETECTOR LOCATED IN ELEVATOR SHAFT FOR ELEVATOR RECALL. PROVIDE ACCESS TO DETECTOR FROM OUTSIDE SHAFT.
8. REFER TO SINGLE LINE DIAGRAM, SHEET E-0.03 FOR FEEDER REQUIREMENTS.
9. 3/4"C.O. TO TELEPHONE BACKBOARD IN 2nd FLOOR IT CLOSET.
10. UP TO LIGHT FIXTURE IN ROOM. REFER TO E-2.01 FOR CONTINUATION.
11. DOOR SHALL OPEN IN THE DIRECTION OF EGRESS FROM ROOM AND BE PROVIDED WITH PANIC HARDWARE.
12. 3"H. CONCRETE HOUSEKEEPING PAD EXTENDING 3" BEYOND EQUIPMENT FOOTPRINT.
13. 3/4"-1#6 TO UFER GROUND BUS. SEE DETAIL 1/E-0.03.
14. 3/4"-1#6 TO POOL BUILDING GROUND ELECTRODE .

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Costa Mesa, CA 92626
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fbaengr.com
FBA Job Number: 535050

REGISTERED PROFESSIONAL ENGINEER 10372 Exp. 09-30-22 ELECTRICAL STATE OF CALIFORNIA

CITY OF GARDENA INCORPORATED 1930

PREPARED BY:
RJM DESIGN GROUP
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San Juan Capistrano, CA 92675
www.RJMdesigngroup.com
(949) 493-2690 fax
(949) 493-2600 phone

REGISTERED LANDSCAPE ARCHITECT Steven Ryan Licensed Landscape Architect Signature 05-25-2022 Expiration Date 12-31-2022 STATE OF CALIFORNIA

B.M.: THE CITY OF GARDENA BENCHMARK NO. SD-15 ELEV. = 43.508'

REVISIONS

NO.	DESCRIPTION	DATE	APPROVED

	INITAL	DATE
DESIGNED BY	SR	05/25/2022
DRAWN BY	SR	05/25/2022
CHECKED BY	BZ	05/25/2022

APPROVED BY:
DATE DIRECTOR OF PUBLIC WORKS

CITY OF GARDENA
DEPARTMENT OF PUBLIC WORKS - ENGINEERING
ELECTRICAL DETAILS
COMMUNITY AQUATICS & SENIOR CENTER
E-4.01

SHT. 140 OF 157 DWG. NO.

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FBA Engineering / Plot Date: 9/29/2022 8:25 AM / Plotted by: Steve Roth / Drawing Location: I:\535\050\E-4.01_535050.dwg

PLOT TIME: 9/29/2022 8:25:10 AM
PLOT BY: Steve Roth
PLOT FILE: 1.535-050-E-4.01_535050.DWG