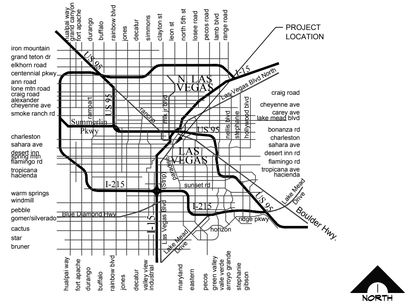
AS-BUILT

SYMPHONY PARK SCULPTURE LIGHTING

850 ROBIN LEACH LN,
LAS VEGAS, NV 89101



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AS-BUILT

LEGEND: (NOTE: NOT ALL SYMBOLS MAY BE USED.)

GENERAL

- EXISTING WORK SHOWN WITH SOLID LIGHTWEIGHT LINES
- NEW WORK SHOWN WITH SOLID HEAVYWEIGHT LINES
- EXISTING BELOW FLOOR / GRADE WORK SHOWN WITH DASHED LIGHTWEIGHT LINES
- NEW BELOW FLOOR / GRADE WORK SHOWN WITH DASHED HEAVYWEIGHT LINES
- DEMO WORK SHOWN WITH DASHED HEAVYWEIGHT LINES
- SHEET NOTE DESIGNATION
- X — REVISION DELTA TAG
- MECHANICAL EQUIPMENT CROSS REFERENCE
- 1 / EX.XX — DIAGRAM CALLOUT, TOP IS THE DIAGRAM NUMBER, BOTTOM IS REFERENCED SHEET
- FOOD SERVICE EQUIPMENT TAG
- HOMERUN CONDUIT, 2 #12 PLUS GROUND (UNLESS NOTED OTHERWISE)
- CONDUIT WITH CAP
- CONDUIT STUB

POWER

- JUNCTION BOX
- SINGLE RECEPTACLE
- DUPLEX RECEPTACLE
- QUADPLEX RECEPTACLE
- ISOLATED GROUND TYPE (ORANGE) DUPLEX RECEPTACLE
- ISOLATED GROUND TYPE (ORANGE) QUADPLEX RECEPTACLE.
- GFCI DUPLEX RECEPTACLE
- SWITCHED DUPLEX RECEPTACLE
- C — COUNTER HEIGHT DUPLEX RECEPTACLE
- SPECIAL PURPOSE RECEPTACLE
- FLOOR MOUNTED DUPLEX RECEPTACLE
- FLOOR MOUNTED QUADPLEX RECEPTACLE
- J — FLOOR MOUNTED JUNCTION BOX - FURNITURE CONNECTION
- PP — POWER POLE / VERTICAL RACEWAY
- MULTI-OUTLET ASSEMBLY
- P — PULLBOX OR VAULT

LIGHTING

- CEILING MOUNTED LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- BOLLARD LIGHT FIXTURE
- STRIP FIXTURE
- TRACK LIGHT FIXTURE
- A / 2 / a — LIGHT FIXTURE: SHADING INDICATES EMERGENCY FIXTURE, UPPER CASE LETTER DENOTES FIXTURE TYPE, LOWER CASE LETTER DENOTES SWITCHING ZONE, NUMBER INDICATES CIRCUIT NUMBER (TYPICAL ALL LIGHT FIXTURE TYPES)
- EMERGENCY LIGHTING UNIT
- EXIT FIXTURE - SHADED AREA DENOTES LIGHTED FACE, ARROWS DENOTE DIRECTION
- POLE MOUNTED AREA LIGHT
- POLE MOUNTED SPORTS FIELD LIGHT FIXTURE

TECHNOLOGY

- TTC — TELEPHONE TERMINAL CABINET
- VOICE/DATA OUTLET
- VOICE OUTLET
- FLOOR MOUNTED VOICE/DATA OUTLET
- WAP — WIRELESS ACCESS POINT
- TV — TELEVISION
- CAMERA
- S — SPEAKER
- CR — CARD READER
- MD — MOTION DETECTOR
- KP — KEY PAD
- ACP — ACCESS CONTROL PANEL
- ICP — INTRUSION CONTROL PANEL

CONTROL DEVICES

- S — SINGLE POLE SWITCH
- S3 — THREE-WAY SWITCH
- S4 — FOUR-WAY SWITCH
- SOS — OCCUPANCY SENSOR SWITCH
- SVS — VACANCY SENSOR SWITCH
- SD — DIMMER SLIDER SWITCH
- SK — KEY OPERATED SWITCH
- SMM — MOMENTARY SWITCH
- SM — THERMAL OVERLOAD SWITCH / MOTOR RATED
- SP — SWITCH WITH PILOT LIGHT
- ST — TIMER SWITCH
- OS — OCCUPANCY SENSOR
- VS — VACANCY SENSOR
- WS — WALL STATION - DIGITAL MULTI-BUTTON
- S1 — WALL STATION - DIGITAL MULTI-BUTTON
- SD2 — WALL STATION - DIGITAL MULTI-BUTTON
- RC — ROOM CONTROLLER (UL924 LISTED WHERE REQUIRED)
- SR — AUTOMATIC SHUNT RELAY (UL924 LISTED)
- LR — AUTOMATIC LOAD CONTROL RELAY (UL924 LISTED, DIMMING OPTION WHERE REQUIRED)
- DS — AUTOMATIC DAYLIGHT DIMMING SENSOR
- LC — LIGHTING CONTACTOR
- TC — TIME CLOCK
- PC — PHOTOCELL
- MOTOR CONTROLLER OR STARTER
- MOTOR CONTROLLER OR STARTER - VENDOR FURNISHED
- COMBINATION MOTOR STARTER / DISCONNECT SWITCH
- COMBINATION MOTOR STARTER / DISCONNECT SWITCH - VENDOR FURNISHED
- F — DISCONNECT SWITCH - FUSIBLE
- DISCONNECT SWITCH - NON-FUSIBLE
- DISCONNECT SWITCH, VENDOR FURNISHED
- CONTACTOR
- CONTACTOR - VENDOR FURNISHED
- VFD — VARIABLE FREQUENCY DRIVE
- PUSHBUTTON CONTROL STATION
- PUSHBUTTON DOOR OPERATOR START / STOP SWITCH

DIAGRAM

- CONTACT - NORMALLY OPEN
- CONTACT - NORMALLY CLOSED
- SWITCH
- FUSE
- SWITCH - FUSIBLE
- CIRCUIT BREAKER
- CIRCUIT BREAKER - DRAWOUT TYPE
- CIRCUIT BREAKER - MEDIUM VOLTAGE DRAWOUT TYPE
- POWER TRANSFORMER
- GROUNDING ELECTRODE
- M — SINGLE POWER METER WITH CT'S
- KW — KILOWATT HOUR DEMAND METER
- M — POWER METER
- DM — DIGITAL SUB-METER
- TRANSFER SWITCH
- SPD — SURGE PROTECTION DEVICE
- C — OPERATING COIL

FIRE ALARM

- F — PULL STATION
- FACP — FIRE ALARM CONTROL PANEL
- FAA — FIRE ALARM ANNUNCIATOR PANEL
- FS — SPRINKLER WATER FLOW SWITCH
- TS — SPRINKLER TAMPER SWITCH
- FSD — FIRE / SMOKE DAMPER
- F — FIREMAN PHONE
- S — SMOKE DETECTOR
- S — DUCT SMOKE DETECTOR
- H — HEAT DETECTOR
- STROBE
- H — HORN
- HORN / STROBE
- S — SPEAKER
- S — SPEAKER/STROBE
- DH — DOOR HOLDER
- PS — POWER SUPPLY

EQUIPMENT

- PANELBOARD SURFACE MOUNTED
- PANELBOARD FLUSH MOUNTED
- SWITCHBOARD OR DISTRIBUTION BOARD
- T — POWER TRANSFORMER
- MOTOR
- G — GENERATOR

NOTE:
REFER TO ELECTRICAL PLANS AND SPECIFICATIONS FOR MOUNTING HEIGHTS.

ABBREVIATIONS:

GENERAL

A	AMPERE	MOP	MAXIMUM OVERLOAD PROTECTION
AL	ALUMINUM	MTS	MANUAL TRANSFER SWITCH
AFCI	ARC FAULT CURRENT INTERRUPTER	MTR	MOTOR, MOTORIZED
AIC	AVAILABLE INCOMING CURRENT	NEC	NATIONAL ELECTRIC CODE
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
ATS	AUTOMATIC TRANSFER SWITCH	NIC	NOT IN CONTRACT
AUX	AUXILIARY	OH	OVERHEAD
BLDG	BUILDING	PH, Ø	PHASE
BMS	BUILDING MANAGEMENT SYSTEM	PNL	PANEL
C	CONDUIT	PVC	POLYVINYL CHLORIDE (CONDUIT)
CLG	CEILING	PWR	POWER
CO	CONDUIT ONLY	RCPT	RECEPTACLE
CU	COPPER	REF	REFERENCE
(E)	EXISTING	RM	ROOM
EM	EMERGENCY	SF	SQUARE FOOT
EMS	ENERGY MANAGEMENT SYSTEM	SPEC	SPECIFICATION
EMT	ELECTRICAL METALLIC TUBING	(SPLT-CKT)	SPLIT CIRCUIT
FAAP	FIRE ALARM ANNUNCIATOR PANEL	SWBD	SWITCHBOARD
FACP	FIRE ALARM CONTROL PANEL	TBD	TO BE DETERMINED
FLA	FULL LOAD AMPS	T-STAT	THERMOSTAT
GFCI	GROUND-FAULT CIRCUIT INTERRUPTER	TV	TELEVISION
GND	GROUND	TYP	TYPICAL
GRS	GALVANIZED RIGID STEEL (CONDUIT)	UG	UNDERGROUND
HP	HORSEPOWER	UNO	UNLESS NOTED OTHERWISE
HVAC	HEATING, VENTILATION AND AIR CONDITIONING	USB	UNIVERSAL SERIAL BUS
J-BOX	JUNCTION BOX	V	VOLTS
K	KELVIN	VA	VOLT AMPERES
KAIC	KILO AMPERE INTERRUPTING CAPACITY	VFD	VARIABLE FREQUENCY DRIVE
KV	KILOVOLT	W	WATT
KVA	KILOVOLT AMPERE	WP	WEATHER PROOF
KVAR	KILOVOLT AMPERE REACTIVE	XFMR	TRANSFORMER
KW	KILOWATT	FT, '	FEET
KWH	KILOWATT HOUR	IN, "	INCHES
LTG	LIGHT, LIGHTING	#	NUMBER
MAX	MAXIMUM	20	SINGLE POLE CIRCUIT BREAKER
MCA	MINIMUM CIRCUIT AMPACITY	20/2	TWO POLE CIRCUIT BREAKER
MCB	MAIN CIRCUIT BREAKER	20/3	THREE POLE CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER	20G	GFCI CIRCUIT BREAKER
MCCB	MOLDED CASE CIRCUIT BREAKER	20AG	ARC FAULT GFCI COMBINATION CIRCUIT BREAKER
MCS	MOLDED CASE SWITCH	20C	CONTROLLABLE CIRCUIT BREAKER
MIN	MINIMUM		
MLO	MAIN LUGS ONLY		
MOCP	MAXIMUM OVERCURRENT PROTECTION		

GENERAL NOTES:

GENERAL

1. WORK ASSOCIATED WITH THE ELECTRICAL CONTRACTOR'S TRADE SHALL BE SHOWN ON OTHER DISCIPLINE'S DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL DRAWINGS ASSOCIATED WITH THIS PROJECT, INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, AND LOW VOLTAGE. ANY ADDITIONAL COST RESULTING FROM THE FAILURE TO INCLUDE ALL SUCH ITEMS SHALL BE INCURRED BY THE CONTRACTOR.
2. THE CONTRACTOR IS RESPONSIBLE FOR FIELD COORDINATING WITH OTHER TRADES PRIOR TO ROUGH-IN TO AVOID INSTALLATION CONFLICTS. EQUIPMENT AND DEVICE LOCATION ADJUSTMENTS IN ANY DIRECTION FROM THAT OF WHAT IS SHOWN ON DRAWINGS SHALL BE MADE AT NO ADDITIONAL COST TO THE PROJECT.
3. THE INTENT OF THE PROJECT DRAWINGS AND SPECIFICATIONS IS TO ESTABLISH A STANDARD OF QUALITY. THE ENGINEER RESERVES THE RIGHT TO APPROVE OR DISAPPROVE INSTALLATION METHODS AND MATERIALS PROPOSED BY THE CONTRACTOR WHICH DEVIATE FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL INCUR ALL ADDITIONAL EXPENSES ASSOCIATED WITH REVISIONS TO PROJECT DRAWINGS OR SPECIFICATIONS WHERE REQUIRED TO ACCOMMODATE THE CONTRACTOR'S PROPOSED CHANGES. THE PROJECT AS-BUILT DRAWINGS SHALL BE UPDATED TO ACCURATELY REFLECT ANY INSTALLATIONS THAT DEVIATE FROM THE ORIGINAL CONSTRUCTION DRAWING SET.
4. ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH THE NECA STANDARDS AND TO THE SATISFACTION OF THE ARCHITECT, AND ENGINEER.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE TO VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID (WHERE APPLICABLE).
6. DRAWINGS ARE BASED ON THE MOST ACCURATE INFORMATION AVAILABLE DURING THE PLANNING AND DESIGN PHASE OF THE PROJECT. HOWEVER, THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FINAL LOCATIONS OF ALL EQUIPMENT, DEVICES (INCLUDING LIGHTING FIXTURES AND MECHANICAL EQUIPMENT) WITH THE ARCHITECT AND ENGINEER PRIOR TO ROUGH-IN. EQUIPMENT AND DEVICE LOCATION ADJUSTMENTS IN ANY DIRECTION FROM THAT OF WHAT IS SHOWN ON THE DRAWINGS, SHALL BE MADE AT NO ADDITIONAL COST TO THE PROJECT.
7. DO NOT SCALE THE ELECTRICAL DRAWINGS. FIELD VERIFY LOCATIONS AND DIMENSIONS PRIOR TO ROUGH-IN.
8. ROUTING OF RACEWAYS WHERE SHOWN ON DRAWINGS IS DIAGRAMMATIC. FINAL ROUTING OF RACEWAYS SHALL BE DETERMINED BY THE CONTRACTOR BASED ON ACTUAL FIELD CONDITIONS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING SURFACES AS REQUIRED WHERE NEW DEVICES OR EQUIPMENT WILL BE INSTALLED. PATCHING SHALL MATCH EXISTING ADJACENT SURFACES. PATCHING MATERIAL AND FINISH TYPE SHALL BE APPROVED BY THE ARCHITECT.
10. THE CONTRACTOR SHALL PROVIDE SHORT CIRCUIT AND OVERCURRENT PROTECTION FOR MECHANICAL EQUIPMENT PER THE EQUIPMENT NAMEPLATE AND MANUFACTURER'S RECOMMENDATIONS. SHOULD THE ACTUAL EQUIPMENT BEING PROVIDED DIFFER FROM INFORMATION SHOWN ON THE ELECTRICAL DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IN WRITING (PRIOR TO THE PURCHASING AND INSTALLING) FOR FURTHER DIRECTION.
11. PENETRATIONS THROUGH RATED WALLS, FLOORS AND CEILINGS SHALL BE SEALED TO MAINTAIN ORIGINAL RATING. PROVIDE FIRE RATED CALKING FOR CONDUIT PENETRATIONS THAT PENETRATE RATED WALLS, AND FIRE RATED PUTTY PADS OR OTHER APPROVED MEANS FOR RECESSED BOXES THAT PENETRATE RATED WALLS.
12. WHERE SHUT-DOWNS OF EXISTING FACILITY POWER SYSTEMS ARE REQUIRED, THE CONTRACTOR SHALL SUBMIT A REQUEST IN WRITING TO THE ARCHITECT AND ENGINEER A MINIMUM OF 5 WORKING DAYS IN ADVANCE.

SHEET INDEX

REV	DATE	DESCRIPTION

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SHEET TITLE: GENERAL INFORMATION

PROJECT: CLV SYMPHONY PARK ART SCULPTURE LIGHTING

JOB NUMBER: 21008

DATE: 2/5/2021

DRAWN BY:

CHECKED BY:

STAMP: PROFESSIONAL ENGINEER STATE OF NEVADA — ROGELIO ESPARZA — EXP. 12-31-22 — ELECTRICAL — No. 23765

DATE: 05/13/2021

SHEET: E0.01

AS-BUILT

SPECIFICATIONS:

PART 1 - GENERAL REQUIREMENTS

1.1 DESCRIPTION

A. SCOPE: THE ELECTRICAL WORK CONSISTS OF FURNISHING ALL COMPONENTS NECESSARY FOR AND INCIDENTAL TO THE EXECUTION AND COMPLETION OF ALL ELECTRICAL WORK INDICATED ON THE DRAWINGS AND SPECIFIED BELOW INCLUDING BUT NOT LIMITED TO:
   1. LIGHTING FIXTURES AS INDICATED AND SPECIFIED ON THE PLANS.
   2. ELECTRICAL PANELS, CONTROLS SERVICE, DISCONNECTS, CONDUITS, WIRING, ETC. FOR ALL OUTLETS AND EQUIPMENT.

B. THE DRAWINGS ARE DIAGRAMMATIC UNLESS INDICATED OTHERWISE. THE DRAWINGS REFLECT CIRCUITING ONLY AND DO NOT DEPICT EXACT CONDUIT ROUTING UNLESS SPECIFICALLY NOTED OTHERWISE.
   1. DATA PRESENTED ON THESE DRAWINGS AS PLANNING CAN DETERMINE, BUT FIELD VERIFICATION OF ALL DIMENSIONS, LOCATIONS, LEVELS, ETC. TO SUIT FIELD CONDITIONS IS REQUIRED. REVIEW ALL ARCHITECTURAL, AND STRUCTURAL DRAWINGS AND ADJUST ALL WORK TO MEET THE REQUIREMENTS OF CONDITIONS SHOWN. DISCREPANCIES BETWEEN DIFFERENT PLANS, OR BETWEEN DRAWINGS AND SPECIFICATIONS, OR REGULATIONS AND CODES GOVERNING THE INSTALLATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING BEFORE THE DATE OF BID OPENING. IF DISCREPANCIES ARE NOT REPORTED, THE CONTRACTOR SHALL BID THE GREATER QUANTITY OR BETTER QUALITY, AND APPROPRIATE ADJUSTMENTS WILL BE MADE AFTER CONTRACT AWARD. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD MEASURE LOCATION OF ELECTRICAL EQUIPMENT. DO NOT SCALE DISTANCES OFF THE ELECTRICAL DRAWINGS. USE ACTUAL BUILDING DIMENSIONS.

C. EXAMINE ALL DRAWINGS FOR WORK REQUIRED BY THIS SUBCONTRACTOR.

1.2 CODES

A. ALL WORK SHALL BE IN ACCORDANCE WITH NEC AND LOCAL GOVERNING CODES.
   1. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH REQUIREMENTS PUBLISHED BY THE SERVING POWER AND TELEPHONE COMPANIES.
   2. ALL FIRE ALARM WORK SHALL BE IN ACCORDANCE WITH STATE FIRE MARSHALL, NFPA AND NFC.

1.3 SUBSTITUTIONS

B. CONTRACTOR'S BID PRICE SHALL REFLECT THE COSTS OF ALL MATERIALS AS SPECIFIED. NO PRIOR APPROVAL OF MATERIALS WILL BE GIVEN PRIOR TO AWARD OF BID.

C. SUBSTITUTIONS OF EQUAL QUALITY, COST AND OF BENEFIT TO THE PROJECT WILL BE EVALUATED AT THE CONTRACTOR'S REQUEST. ANY ADDITIONAL COST TO THE PROJECT FOR REVIEW OF SUBSTITUTIONS WILL BE AT THE CONTRACTOR'S EXPENSE. CONTRACTOR TO PROVIDE ALL NECESSARY PHOTOMETRIC POINT BY POINT LAYOUT FOR ALL SUBSTITUTED FIXTURES.

D. AFTER REVIEW OF SUBSTITUTIONS, THE DECISION OF THE ENGINEER IN DETERMINING EQUAL MATERIALS WILL BE FINAL.

1.4 SUBMITTALS

A. PROVIDE SUBMITTALS FOR THE FOLLOWING EQUIPMENT:
   1. PANELBOARDS, SWITCHBOARDS, TRANSFORMERS
   2. WIRING DEVICES AND DIMMERS
   3. DISCONNECTS
   4. CIRCUIT BREAKERS
   5. LIGHTING FIXTURES
   6. CONDUCTORS, CABLES AND RACEWAYS

B. SHOP DRAWINGS AND APPROVALS
   1. THE CONTRACTOR SHALL SUBMIT ELECTRONIC FILES, IN PDF FORMAT, OF SHOP DRAWINGS ON THE FOLLOWING ITEMS:
      a. OUTLINE DRAWINGS AND DATA SHEETS OF EACH CIRCUIT BREAKER, DISCONNECT, AND PANELBOARD.
   2. HIGHLIGHT SERVICE CONDITIONS OF EQUIPMENT AND THE APPROPRIATE DERATING TO MEET 2.1.B.
      a. DATA SHEETS OF ALL WIRING DEVICES, LIGHTING FIXTURES, AND FUSES.

1.5 QUALITY ASSURANCE

A. ALL WORK SHALL BE COMPLETED IN A NEAT AND WORKMANLIKE MANNER AND IN ACCORDANCE WITH NECA STANDARDS.

B. ALL WORK SHALL BE SUBJECT TO INSPECTION AND POSSIBLE REJECTION IF NOT IN ACCORDANCE WITH THESE SPECIFICATIONS, THE DRAWINGS, AND INSTALLED IN NEAT AND WORKMANLIKE MANNER.

C. ANY REJECTED WORK SHALL BE REPLACED, BY THE CONTRACTOR, AT NO ADDITIONAL COST TO THE PROJECT.

D. ALL SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW DEFECTIVE WORK , THE CONTRACTOR SHALL MAKE CORRECTIONS AS NECESSARY AT NO ADDITIONAL COST TO THE PROJECT.

E. THE CONTRACTOR SHALL PROVIDE FUNCTIONAL TESTING PER IECC C408.3

PART 2 - PRODUCTS

2.1 MATERIAL AND EQUIPMENT

A. MATERIAL AND EQUIPMENT SHALL BE NEW AND OF CURRENT PRODUCTION BY MANUFACTURERS REGULARLY ENGAGED IN THE MANUFACTURER OF SUCH ITEMS. ELECTRICAL SWITCHGEAR AND COMPONENTS SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER. ALL MATERIAL SHALL BE U.L. LISTED.

B. SERVICE CONDITIONS
   3. TEMPERATURE
      a. INDOOR - 40 DEGREE C (100 DEGREE F)
      b. OUTDOOR - 60 DEGREE C (140 DEGREE F)

C. CONDUITS
   1. INTERIOR CONDUIT SHALL BE EMT WITH COMPRESSION OR SET SCREW FITTINGS.
   2. EXTERIOR CONDUITS EXPOSED TO DAMAGE SHALL BE TYPE RGS.
   3. EXTERIOR BURIED CONDUITS SHALL BE SCHEDULE 40 PVC WITH PVC COATED RGS BENDS WHEN PENETRATING THROUGH FLOOR SLABS. CONDUITS PENETRATING FLOOR SLABS SHALL BE INSTALLED A MINIMUM OF 2" AFF.
   4. FMC SHALL BE USED FOR FINAL CONNECTION TO LIGHTING FIXTURES NOT TO EXCEED 72 INCHES.
      a. FNC OR ALUMINUM FMC SHALL NOT BE USED.
      b. FMC, EXCEPT AS NOTED ABOVE, SHALL NOT BE USED WITHOUT PRIOR APPROVAL OF THE ENGINEER.
   5. LIQUID-TITE FMC SHALL BE USED FOR FINAL CONNECTION TO MOTORS.
   6. CONDUIT FITTINGS SHALL BE STEEL OR MALLEABLE IRON TYPE.
   7. CONDUITS SHALL BE COLOR CODED USING USE COLORED TAPE OR PAINT - TAPE OR PAINT TO IDENTIFY CONDUIT BY SYSTEM:
      a. NON-EMERGENCY POWER - YELLOW.
      b. SECURITY & CLOSED CIRCUIT TELEVISION (SURVEILLANCE) CABLE - PURPLE.

D. CABLE
   1. CONDUCTORS SHALL BE TYPE THHN/THWN 75 DEGREE WIRE.
      a. ALL UNDERGROUND CONDUCTORS SHALL BE TYPE THW.
   2. CONDUCTORS SHALL BE COPPER, UNLESS NOTED OTHERWISE.
      a. EQUIVALENT ALUMINUM WIRE (8000 ALLOY) MAY BE USED IN LIEU OF COPPER FOR SIZES #1/0 AND LARGER. USE COMPRESSION FITTINGS FOR ALL CONNECTIONS AND RESIZE CONDUIT AND CONDUCTORS AS REQUIRED. SUBMIT SIZING AND VOLTAGE DROP CALCULATIONS TO ENGINEER FOR REVIEW.
   3. MINIMUM WIRE SIZE SHALL BE #12 AWG.
      a. 120V BRANCH CIRCUITS OVER 65 FEET IN LENGTH FROM THE CENTER OF THE LOAD TO THE PANEL SHALL BE #10 AWG AND BRANCH CIRCUITS OVER 130 FEET SHALL BE #8 AWG. INCREASE CONDUIT AND WIRE SIZES AS REQUIRED AT NO ADDITIONAL COST TO THE PROJECT.
   4. UNLESS OTHERWISE REQUIRED BY LOCAL ORDINANCES, ALL WIRING THROUGHOUT SHALL BE COLOR CODED AS FOLLOWS.

	480 VOLT SYSTEM	208 VOLT SYSTEM
A PHASE	BROWN	BLACK
B PHASE	ORANGE	RED
C PHASE	YELLOW	BLUE
NEUTRAL	GRAY	WHITE
GROUND	GREEN	GREEN
ISOLATED	---------	GREEN WITH YELLOW STRIPE

E. WIRING DEVICES
   1. WIRING DEVICES SHALL BE AS FOLLOWS:
      a. RECEPTACLES - 120V, 20A NEMA 5-20R, SPECIFICATION GRADE, SIDE AND BACK WIRED WITH CLAMP TYPE TERMINALS, NYLON, WHITE, 2 POLE, 3 WIRE GROUNDING. MOUNT AT 18" A.F.F. TO CENTER UNLESS NOTED OTHERWISE.
         1) PROVIDE RED COLOR FOR EMERGENCY OUTLETS.
      b. SWITCHES - 120V/277V, 20A, WHITE , HEAVY DUTY, SILENT TYPE SPECIFICATION GRADE. MOUNT AT 48" A.F.F. TO CENTER UNLESS NOTED OTHERWISE.
      c. ISOLATED GROUND RECEPTACLES SHALL BE EQUAL TO PASS & SEYMOUR, CAT. #IG9300-HG, COLOR ORANGE. MOUNT AT 18" A.F.F. TO CENTER UNLESS NOTED OTHERWISE.
   2. DEVICE PLATES SHALL BE NYLON, COLOR SHALL MATCH DEVICE WITH MATCHING SCREWS.
      a. RECEPTACLES IN WET LOCATIONS SHALL BE INSTALLED WITH A HEAVY DUTY, CAST ALUMINUM, HINGED OUTLET COVER/ENCLOSURE CLEARLY MARKED SUITABLE FOR WET LOCATIONS WHILE-IN-USE AND UL LISTED EQUAL TO:
         1) TAY MAC - ML400G AND SINGLE GANG 5881-0.
         2) INERMATIC - WP1000RC.

F. PANELBOARDS
   1. SHALL BE GE "A" SERIES WITH BOLT ON BREAKERS:
      a. APPROVED SUBSTITUTE MANUFACTURERS ARE SQUARE D, EATON, ITE AND SIEMENS.
   2. SHALL BE DEAD FRONT TYPE ONLY.
   3. GUTTER SPACE SHALL MEET APPLICABLE NEC REQUIREMENTS.
   4. SHALL BE FULLY BUSSED WHERE SPACE IS NOTED.
   5. WIRE TERMINATION FOR PANELBOARDS AND CIRCUIT BREAKERS SHALL BE LISTED AS SUITABLE FOR 75 DEGREE C.
   6. BUS BARS SHALL BE ALUMINUM.
   7. PANELS SHALL BE DOOR-IN-DOOR TYPE.
   8. PANELBOARDS SHALL BE FURNISHED BY A SINGLE MANUFACTURER.

G. SAFETY SWITCHES SHALL BE GENERAL DUTY TYPE, NEMA 1 INDOOR AND NEMA 3R OUTDOOR.

H. OVERCURRENT PROTECTION DEVICES:
   1. CIRCUIT BREAKERS SHALL BE OF THE SAME MANUFACTURERS AS PANELBOARDS AND SWITCHBOARDS. PROVIDE BREAKERS AS NOTED ON THE SCHEDULE.
   2. FUSES USED TO PROTECT MOTORS SHALL BE BUSSMAN TYPE FRN-R. ALL FUSES INSTALLED IN FUSED DISCONNECTS SHALL BE CLASS R UNLESS NOTED OTHERWISE.
   3. PROVIDE HACR RATED BREAKERS FOR MECHANICAL EQUIPMENT.
   4. CIRCUIT BREAKERS 100AMPS AND LARGER SHALL BE 100% RATED.

I. PROVIDE GROUNDING FOR ALL BRANCH CIRCUITS. CONDUIT, LISTED FOR USE, MAY BE USED FOR GROUNDING 20A BRANCH CIRCUITS ONLY WHEN APPROVED FOR SUCH USE. ALL FMC AND NON-METALLIC CONDUIT SHALL HAVE A SEPARATE GROUND WIRE.

J. LIGHTING FIXTURES AND ACCESSORIES:
   1. PROVIDE LIGHTING FIXTURES AS SHOWN ON LIGHTING FIXTURE SCHEDULE.
   2. PROVIDE LAMPS FOR ALL FIXTURES.
      a. LAMPS SHALL BE GUARANTEED AS FOLLOWS:
         1) LED - 12 MONTHS FROM BENEFICIAL OCCUPANCY.
   3. ELECTRONIC BALLASTS SHALL HAVE .95 POWER FACTOR, .875 BALLAST FACTOR AND LESS THAN 15% TOTAL HARMONIC DISTORTION.

K. OUTLET, PULL AND JUNCTION BOXES
   1. EACH SWITCH, LIGHT, RECEPTACLE OR OTHER OUTLET SHALL BE PROVIDED WITH A CODE GAUGE, GALVANIZED STEEL OUTLET BOX. JUNCTION AND PULLBOXES SHALL BE CODE GAUGE, GALVANIZED STEEL. OUTLET BOXES SHALL BE OF THE ONE PIECE, KNOCKOUT TYPE, IN GENERAL 4" SQUARE WITH PLASTER RING. PLASTER RINGS SHALL BE SET TO PROVIDE NOT MORE THAN 1/8" FROM WALL SURFACE TO RING. IN NO CASE SHALL PLASTER RING PROJECT BEYOND SURFACE OR WALL. SINGLE GANG RINGS SIMILAR TO STEEL CITY 52-C-50 SHALL BE USED FOR 4" BOXES IN UNFINISHED BRICK. RACO 3180 BOXES MAY BE USED FOR UNFINISHED MASONRY FLUSH WALL OUTLETS. CENTER ALL OUTLET BOXES IN BLOCK AT OUTLET LOCATIONS.

L. TRANSFORMER
   1. DRY TYPE, 600 VOLTS CLASS, UL LISTED. DRY TYPE TRANSFORMERS SHALL BE OF THE FOLLOWING TYPE: 480 VOLT PRIMARY TO 120/208 VOLT 3-PHASE, 4-WIRE SECONDARY AND 240 VOLT PRIMARY TO 480/277Y, 3 PHASE, 4 WIRE SECONDARY WITH CAPACITIES AS SHOWN ON DRAWINGS. TRANSFORMERS SHALL BE 80 DEGREES CELSIUS RISE WITH COPPER WINDINGS AND ELECTRONIC SHIELDS.
   2. NOISE LEVEL SHALL BE A MAXIMUM OF 50 DB. AVERAGE MEASURED AT DISTANCE OF 1' FROM THE CASE PER PUBLICATION #ITF-1 1960 OR PER LATEST REVISION THEREOF. TRANSFORMERS SHALL BE INSTALLED 6" FROM WALLS.

PART 3 - EXECUTION

3.1 INSTALLATION

A. EQUIPMENT LOCATIONS SHALL BE AS CLOSE AS PRACTICAL TO LOCATIONS SHOWN ON THE PLAN DRAWINGS AND SUBJECT TO SUCH APPROVED REVISIONS AT NO COST TO THE PROJECT AS MAY BE FOUND NECESSARY OR DESIRABLE AT THE TIME WORK IS INSTALLED.

B. CLOSE ALL OPENINGS IN WALLS, FLOORS, AND ROOFS TO THE APPROVAL OF THE ARCHITECT.

C. PAINT ALL CONDUITS AND BOXES THAT ARE REQUIRED TO BE EXPOSED TO MATCH BUILDING SURFACES. RUN ALL EXPOSED CONDUIT PARALLEL TO BUILDING LINES

D. PROVIDE ENGRAVED PHENOLIC NAMEPLATES ON ALL EQUIPMENT AND INSTALL TYPED DIRECTORY IN PANELBOARDS. FASTEN NAMEPLATES WITH SCREWS OR RIVETS, DO NOT USE ADHESIVE.

E. COORDINATE THE WORK WITH OTHER TRADES.

F. MEGGER TEST ALL FEEDER CIRCUITS AFTER INSTALLATION.

G. INSTALL NYLON PULL CORD (TINSEL STRENGTH OF 200 POUNDS MINIMUM) IN ALL EMPTY/SPARE CONDUITS. LABEL EACH END OF THE PULLCORD WITH THE LOCATION OF THE OPPOSITE END.

H. PATCH AND REPAIR AREA WHERE ITEMS HAVE BEEN DEMOLISHED OR DAMAGED DURING CONSTRUCTION TO MATCH ADJACENT SURFACES TO ARCHITECT/ENGINEER APPROVAL.

I. INSTALL PULLBOXES SUCH THAT THEY ARE LOCATED AT THE HIGH POINT OF THE CONDUITS WITH 24" OF PEA GRAVEL INSTALLED BELOW.

J. COMPLETELY AND THOROUGHLY SWAB RACEWAY BEFORE INSTALLING WIRE.

K. REQUEST INSPECTIONS FROM LOCAL GOVERNING AUTHORITIES.

L. CONDUITS SHALL NOT BE INSTALLED THROUGH STRUCTURAL FOOTINGS UNO PER STRUCTURAL ENGINEER.

3.2 PROJECT COMPLETION

A. REMOVE ALL DISCARDED MATERIALS FROM DEMOLITION AND INSTALLATION FROM THE JOB SITE.

B. PROVIDE REPRODUCIBLE RECORD DRAWINGS OF ALL COMPLETED WORK.

C. GUARANTEE ALL MATERIAL FURNISHED AND ALL WORKMANSHIP PERFORMED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK. ANY DEFECTS DEVELOPING WITHIN THIS PERIOD, TRACEABLE TO MATERIAL FURNISHED AS A PART OF THIS SECTION OR WORKMANSHIP PERFORMED HEREUNDER, SHALL BE MADE GOOD AT NO ADDITIONAL EXPENSE TO THE PROJECT.

"END OF SECTION"

REV	DATE	DESCRIPTION

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8728 Spanish Ridge Ave.
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P: 702.871.3821
www.tjkengineers.com

TJK 21008

SHEET TITLE: SPECIFICATIONS

PROJECT: CLV SYMPHONY PARK ART SCULPTURE LIGHTING

JOB NUMBER: 21008

DATE: 2/5/2021

DRAWN BY:

CHECKED BY:

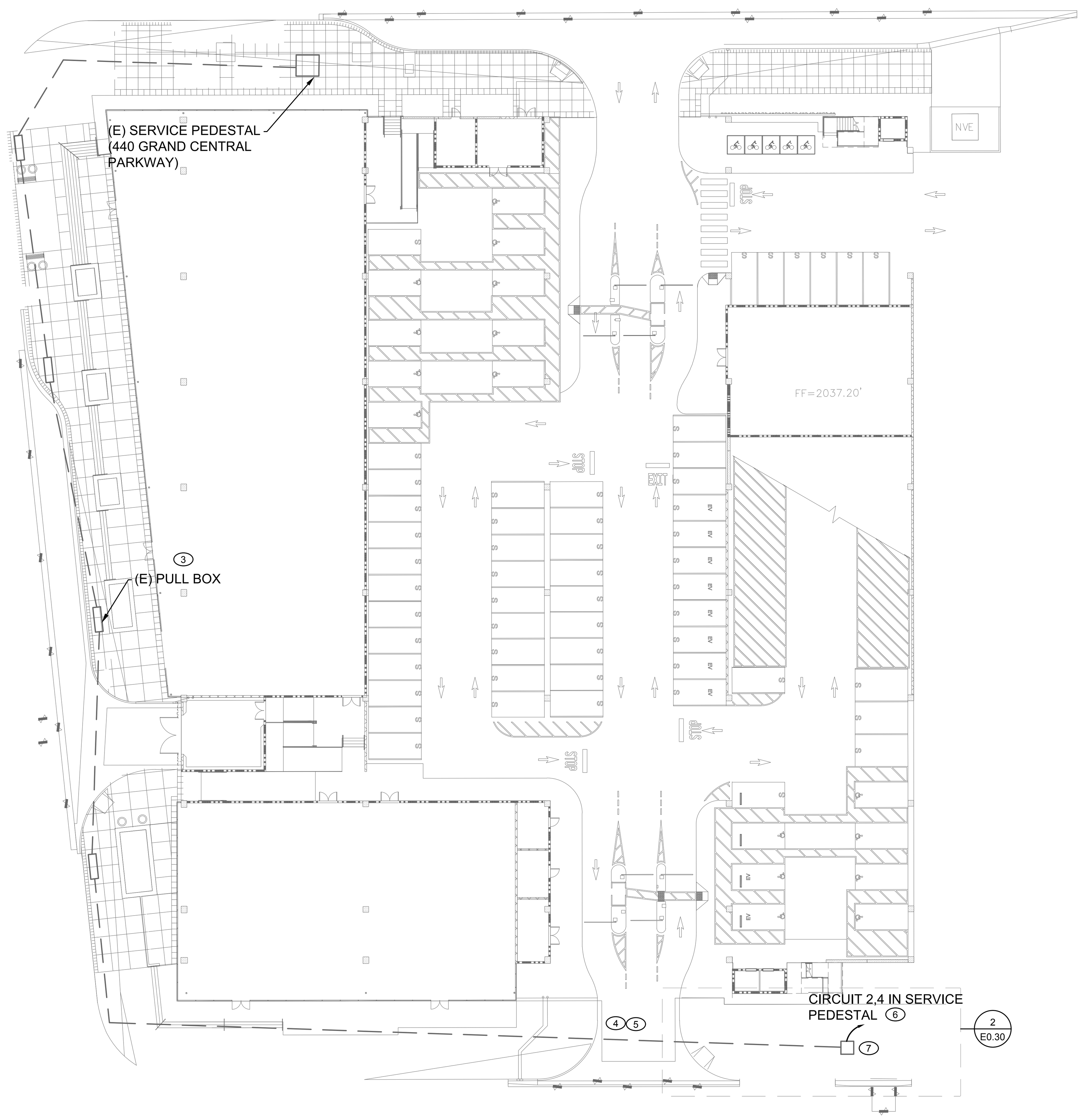
STAMP:

PROFESSIONAL ENGINEER-STATE OF NEVADA
ROGELIO ESPARZA
EXP. 12-31-22
ELECTRICAL
No. 23765

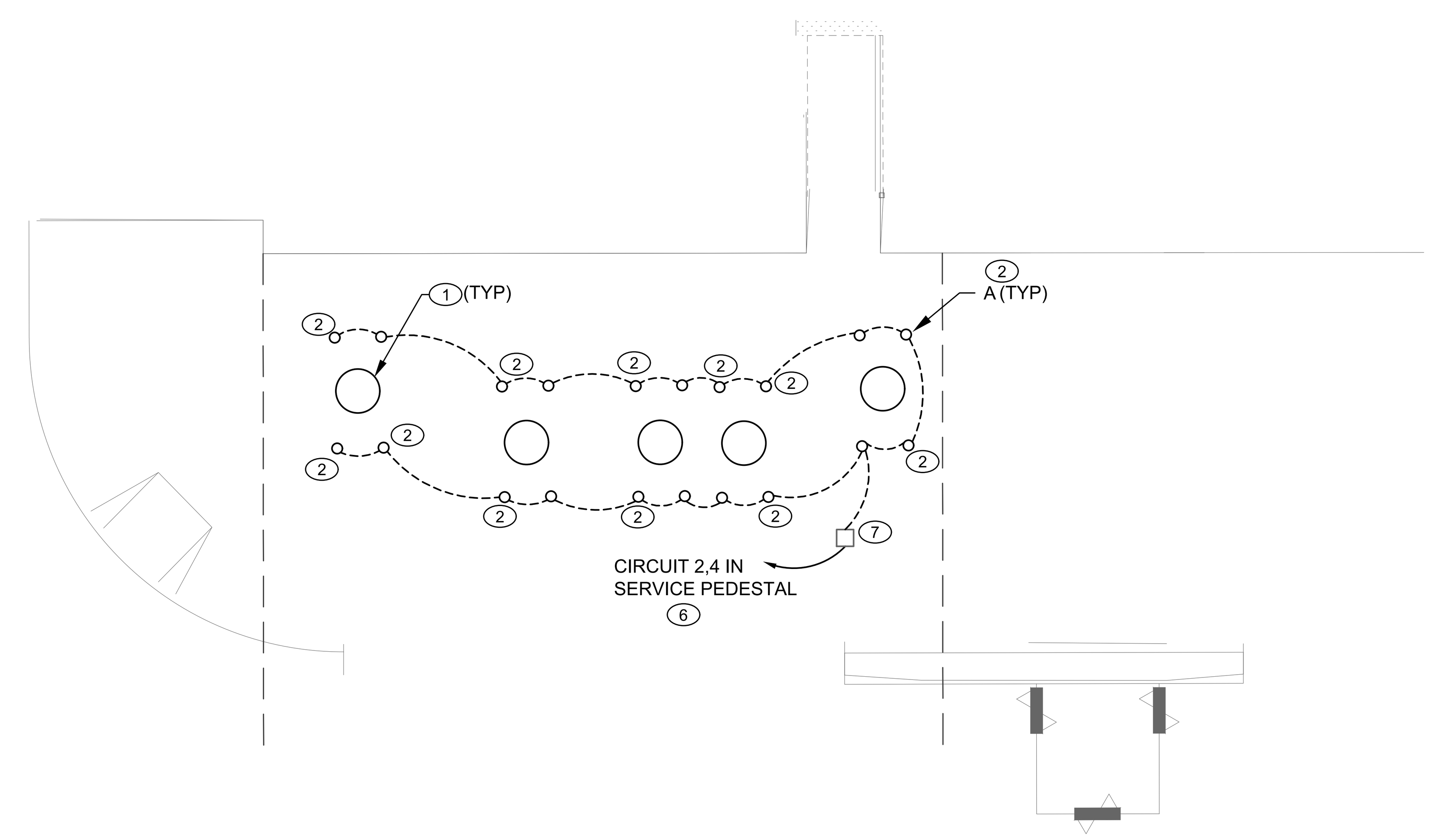
DATE: 05/13/2021

SHEET: E0.02

AS-BUILT



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



2 ENLARGED PLAN
SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES:

A. ALL EXTERIOR LIGHTING SHALL BE CONTROLLED THRU PHOTOCELL/TIMECLOCK.

KEYNOTES:

1. SCULPTURE MOUNTING PLATE. REFER TO SCULPTURE DESIGN DRAWINGS FOR EXACT LOCATION AND SIZE.
2. FLUSH MOUNTED LED LIGHTS, AT 60 DEGREE ANGLE.
3. NEAREST PULL BOX WITH STREET LIGHTING CONDUCTORS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITION.
4. ROUTE 2#10, 1#10 GND IN 1-1/2" CONDUIT.
5. TIE TO THE NEAREST PULL BOX WITH STREET LIGHTING CONDUCTORS FED FROM SERVICE PEDESTAL 440 GRAND CENTRAL PARKWAY.
6. ROUTE CIRCUIT THROUGH ASTRONOMICAL TIME CLOCK.
7. EXISTING IN GROUND VAULT FOR LANDSCAPE LIGHTING. INTERCEPT EXISTING CIRCUIT AT VAULT.

REV	DATE	DESCRIPTION

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SHEET TITLE: SITE PLAN

PROJECT: CLV SYMPHONY PARK ART SCULPTURE LIGHTING

JOB NUMBER: 21008

DATE: 2/5/2021

DRAWN BY:

CHECKED BY:

STAMP: PROFESSIONAL ENGINEER - STATE OF NEVADA, ROGELIO ESPARZA, EXP. 12-31-22, ELECTRICAL, No. 23765

DATE: 05/13/2021

SHEET: E0.30

AS-BUILT

LIGHTING FIXTURE SCHEDULE

FIXT ID	DESCRIPTION	MANUFACTURER AND CATALOG NO.	LAMPS WATTS	LAMPS TYPE	LAMPS KELVIN/CRI	CKT VOLTS	MOUNTING	REMARKS
A	10-3/8" DIA. INGROUND LANDSCAPE RECESSED LED	KIM LIGHTING LTV82FF-NF-1823K	22	LED	3000/70	240	RECESSED	1911 LUMENS, INTEGRAL DIMMER, FLUSH MOUNTED AT 60 DEGREE ANGLE

(E) SERVICE PEDESTAL

LOCATION: 440 GRAND CENTRAL PKWY
SUPPLY FROM:
MIN. BUS CAPACITY (A): 200
MAIN BREAKER: YES

VOLTAGE 120/240V
PHASES: SINGLE
WIRES: THREE

ENCLOSURE TYPE: NEMA 3R
MOUNTING: FLOOR
AIC RATING (A): 65000.00

NOTES: EXISTING 20 CIRCUIT PANEL

NOTES	CKTS	LOAD	LOAD DESCRIPTION	CKT BRK TRIP	CONNECTED LOAD (VA)			CKT BRK TRIP	LOAD DESCRIPTION	LOAD	CKTS	NOTES
	1	L	(E) PKG LOT "A"	60/2	2880	A	2280	60/2	(N) PKG LOT "B" & SYMPHONY LIGHT	L	2	
	3	L			2880	B	2280			L	4	
	5		SPACE			A	1800	15	(E) PEC	M	6	
	7		SPARE	60		B	1800	20	(E) IRRIGATION CLOCK	M	8	
	9		SPARE	30		A		30	SPARE		10	
	11		SPARE	30		B		30	SPARE		12	
	13		SPACE			A			SPACE		14	
	15		SPACE			B			SPACE		16	
	17		SPACE			A			SPACE		18	
	19		SPACE			B			SPACE		20	

	CONNECTED VA		DEMAND VA
TOTAL RECEPTACLE (R)	0	0%	0
TOTAL MOTOR (M) LOAD	3,600	138%	4,950
TOTAL LIGHTING (L) LOAD @ 125%	10,320	125%	12,900
TOTAL KITCHEN (K) LOAD @100%	0	0%	0
TOTAL FIXED (F) LOAD	0	0%	0
TOTAL OTHER (O) LOAD	0	0%	0
TOTAL ELEVATOR (EL) LOAD @ 100%	0	0%	0
NOTES: TOTAL	13,920		17,850

	AMP/PHASE	
CONNECT	A | 29 B | 29	
DEMAND	A | 72.5 B | 72.5	
	TOTAL CONNECTED AMP	58
	TOTAL DEMAND AMP	74
	PERCENT LOADED	37%

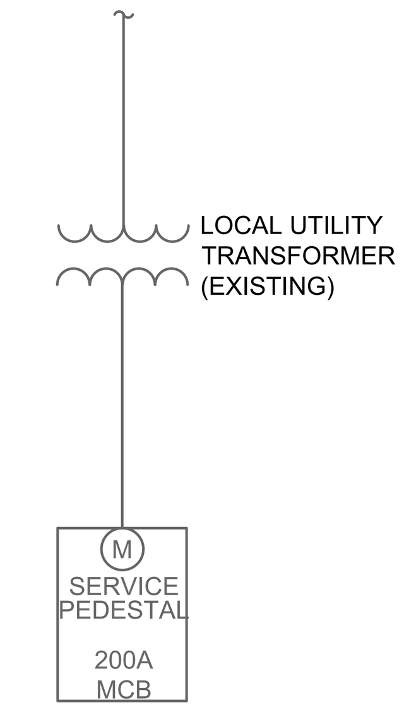
*CONNECTED PANEL (S) LOADS INCLUDED ABOVE

ELECTRICAL LOAD VERIFICATION- (E) 200A SERVICE PEDESTAL

PROJECT NAME CLV SYMPHONY PARK ART SCULPTURE LIGHTING
PROJECT NUMBER 21008
PROJECT VOLTAGE 240/120V

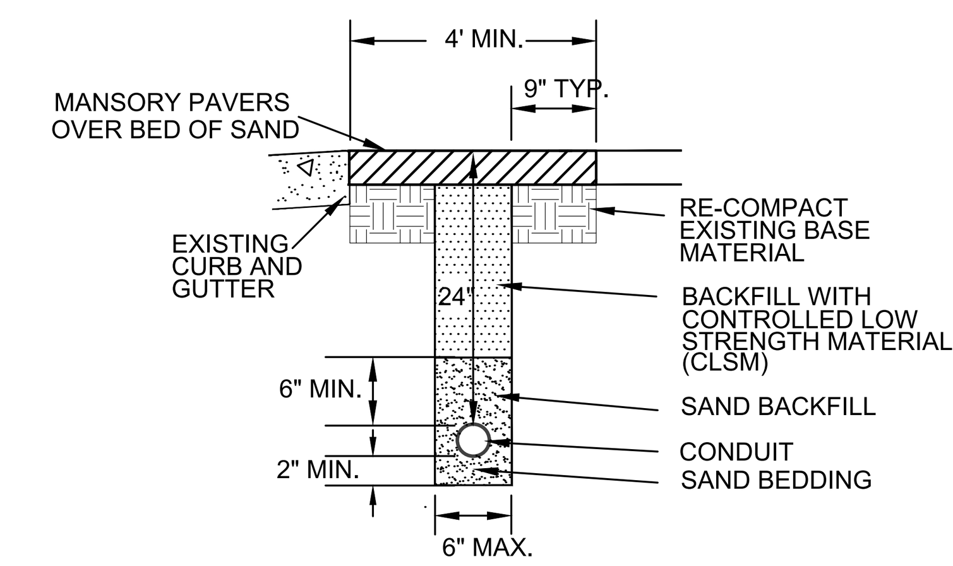
			DF	DEMAND
EXISTING DEMAND				
	11 KW	0.8 PF	1.25	17580
EQUIPMENT TO BE ADDED				
	28 ST LIGHT	22 VA	1.25	770
			TOTAL	18350
		76.5	AMPS	

(E) SERVICE PEDESTAL HAS SPARE CAPACITY OF 125A, AND TO REMAIN.



1 EXISTING SERVICE PEDESTAL

SCALE: NOT TO SCALE



CONDUIT RETROFIT (EXIST. PAVEMENT)

2 TRENCH DETAIL

SCALE: NOT TO SCALE

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TJK 21008

SHEET TITLE: ONE LINE DIAGRAM

PROJECT: CLV SYMPHONY PARK ART SCULPTURE LIGHTING

JOB NUMBER: 21008

DATE: 2/5/2021

DRAWN BY:

CHECKED BY:

STAMP: PROFESSIONAL ENGINEER - STATE OF NEVADA, ROGELIO ESPARZA, EXP. 12-31-22, ELECTRICAL, No. 23765

DATE: 05/13/2021

SHEET: E5.01