



CHINO BASIN WATER CONSERVATION DISTRICT

4594 SAN BERNARDINO ST
MONTCLAIR, CA 91763

ADDENDUM NO. 1

CIP NO. 2025-01 – NEW AMPHITHEATER ROOF, RECLADDING, AND DRAINAGE IMPROVEMENTS

June 23, 2025

NOTE: To all bidders submitting proposals for the above captioned project, this Addendum is hereby included in the Contract Documents to the same extent as though it were originally included therein. The following items modify, add to, delete from, or explain the drawings and/or specifications. The contents of this Addendum shall take precedence over the original specifications and plans.

Acknowledge receipt of the Addendum per the Bidder's Checklist on page CD-11 of the Contract Documents and Specifications (8 pages total, including omitted Electrical plans). Failure to do so may result in the bid being deemed non-responsive. It is the responsibility of all bidders to notify all subcontractors from whom they request bids and from whom they accept bids of all changes contained in this addendum. **All other terms and conditions remain unchanged.**

ADDENDUM NO. 1 CONTENTS

I. SPECIFICATIONS

SPECIFICATIONS

1. ADDENDUM NARRATIVE FOR REMOVED ELECTRICAL SCOPE:

- Sheet E-002 – Deleted in its entirety
- Sheet E-101 – Deleted in its entirety
- Sheet E-301 – Deleted in its entirety
- Sheet E-401 – Deleted in its entirety
- Sheet E-501 – Deleted in its entirety

2. DESCOPED ELECTRICAL DRAWINGS:

- 7 PAGES TOTAL

* * * END OF ADDENDUM NO. 1 * * *



MOUNTING: SURFACE
FED FROM: PANEL L1'
NEAR: 1
A/C RATING: EXISTING

PANEL
L3
(EXISTING)
LOCATION: ELECTRICAL ROOM

VOLTAG: 208Y120V 3PH 4W
BUS: 125'
MAIN: M.L.O
FEEDER: EXISTING

N O T E	P T Y P E	P A N E L					P A N E L										P A N E L					N O T E						
		AMP	PH	T	V.D.	C.	A	B	C	C.	V.D.	DIS	W/O	AMP	PH	T	A	B	C	C.	V.D.							
	DESCRIPTION																										DESCRIPTION	
1	(E) RECEPT. LAMP DOOR	--	1	20	A	--	--	0	--	1	1176	200								2	--	0	--	20	A	1	--	(E) TOILET LTG/FANS
1	(E) A/V CABINET REC	--	1	20	A	--	--	0	--	3										4	--	0	--	20	A	1	--	(E) EF-3
1	(E) TOWER LOUVER	--	1	20	A	--	--	0	--	5										6	--	0	--	20	A	1	--	(E) EF-6
1	(E) TOWER LTG.	--	1	20	A	--	--	0	--	5	7	200	912							8	--	0	--	20	A	1	--	(E) CU-4
1	(E) LOBBY FLOOR REC	--	1	20	A	--	--	0	--	9										10	--	0	--	20	A	1	--	(E) PROJECTOR
1	(E) GD-1	--	1	20	A	--	--	0	--	11										12	--	0	--	20	A	1	--	(E) WINDOW SHADES
1	(E) LOBBY FLOOR RECEPT.	--	1	20	A	--	--	0	--	13	360	0								14	--	0	--	20	A	1	--	SPARE
	SPARE	--	1	20	A	--	--	0	--	15										16	--	0	--	20	A	1	--	SPARE
	SPARE	--	1	20	A	--	--	0	--	17										18	--	0	--	20	A	1	--	SPARE
	SPARE	--	1	20	A	--	--	0	--	19	0	0								20	--	0	--	20	A	1	--	SPARE
	SPARE	--	1	20	A	--	--	0	--	21										22	--	0	--	20	A	1	--	SPARE
	SPACE	--	1	--	--	--	--	--	--	23										24	--	0	--	--	--	--	--	SPACE
	TWIST-OUT AREA	--	1	--	--	--	--	--	--	25										26	--	0	--	--	--	--	--	TWIST-OUT AREA
	TWIST-OUT AREA	--	1	--	--	--	--	--	--	27										28	--	0	--	--	--	--	--	TWIST-OUT AREA
	TWIST-OUT AREA	--	1	--	--	--	--	--	--	29										30	--	0	--	--	--	--	--	TWIST-OUT AREA
SUBTOTALS							2848 VA	2180 VA	1710 VA																			
DEMAND FACTORS:		CONNECTED		DEMAND		DEMAND		DEMAND		SUBTOTAL		PHASE		NOTES:														
		LOAD TYPE		VA		FACTOR		VA		AMPS		A																
														2. EXISTING BREAKER, EXISTING LOAD														
(L) LIGHTING						1.25								2. NEW BREAKER, NEW LOAD														
(R) RECEPTACLES						NEC 220.44																						
(M) MOTOR						1.25																						
(LARGEST MOTOR						0.25																						
(C) CONTINUOUS						1.25																						
(N) NON-CONTINUOUS						1.00																						
(K) KITCHEN (NEC 220.56)						0.65																						
(S) SPECIAL DEMAND						1.00																						
(E) EXISTING LOAD (NEC 220.87)						6738 VA				8423 VA		23 A																
TOTALS						6738 VA				8423 VA		23 A																
TOTAL AMPS AT 208Y120V 3PH 4W WITH LCL:												23 A																

SINGLE LINE DIAGRAM & PANEL SCHEDULES

1

GENERAL NOTES

1. REFER TO "GENERAL NOTES" ON ELECTRICAL LEGENDS AND NOTES SHEET FOR WIRING METHODS, MATERIALS, AND REQUIREMENTS.
2. ALL CIRCUIT BREAKERS AND PANELBOARDS SHALL BE OF THE SAME MANUFACTURER.
3. THE FEEDER LENGTHS SHOWN ON THESE DRAWINGS ARE FOR CALCULATION PURPOSES ONLY AND ARE NOT VALID FOR BIDDING.
4. CONTRACTOR SHALL UPDATE ALL MODIFIED PANEL DIRECTORIES OR CREATE A NEW TYPE DIRECTORY IF ONE DOES NOT EXIST OR IF THE EXISTING ONE IS OUT OF DATE. THE TYPE DIRECTORY TO BE MOUNTED IN GLASS OR PLASTIC INSIDE DOOR THE CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING DIRECTIONS TO INDICATE ALL NEW CIRCUITS AND STATUS. A RECORD SERVICE IS NOT NECESSARY. THE CONTRACTOR IS INDICATED TO PROVIDE THE TYPE DIRECTORY OR TYPEWRITER TO CREATE DIRECTORY, HANDWRITTEN DIRECTIONS ARE NOT ACCEPTABLE.
5. EQUIPMENT DATA AND CONFIGURATIONS SHOWN ON THE SINGLE LINE DIAGRAM PROVIDE GENERAL EQUIPMENT INFORMATION. CONTRACTOR SHALL VERIFY ALL ELECTRICAL EQUIPMENT IS SPECIFICALLY LISTED TO VERIFY ALL EQUIPMENT ASSOCIATED DESIGN INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY COMPONENTS AND MATERIALS FOR CORRECT INSTALLATION. INSTALLATION, ANY DISCREPANCIES BETWEEN DESCRIPTIONS, SPECIFICATIONS, AND EXISTING CONDITIONS ARE TO BE PRESENTED TO THE ENGINEER OR ARCHITECT FOR COMPLETION OF THE BID PROGRAM. FOR CLARIFICATION NO EQUIPMENT SHALL BE ORDERED UNTIL DISCREPANCIES ARE RESOLVED THROUGH A FORMAL RFI PROCESS.
6. GROUND ALL ELECTRICAL EQUIPMENT, BRANCH CIRCUITS, FEEDERS, PANEL AND DISTRIBUTION BOARDS, ELECTRICAL SERVICES, ETC. PER ADOPTED NEC ARTICLES 250.
7. ALL ELECTRICAL EQUIPMENT (I.E. SWITCHGEAR, DISTRIBUTION BOARDS, TRANSFORMERS, DISCONNECT SWITCHES, ETC) SHALL BE PROVIDED WITH A PHENOLIC NAMEPLATE WITH ENGRAVED LETTERS PER SPECIFICATIONS. ALL NAMEPLATES SHALL BE FASTENED WITH TWO (2) MACHINE SCREWS. NO SELF-ADHESIVE NAMEPLATES ARE ALLOWED.
8. ELECTRICAL CONTRACTOR TO INCLUDE IN BID ALL ASSOCIATED COSTS FOR THIRD PARTY TESTING OF ELECTRICAL EQUIPMENT, GROUND FAULT, CONDUCTORS, ETC.
9. CONTRACTOR SHALL FURNISH AND INSTALL MISSING FILLER PLATES IN PANELBOARDS/SWITCHBOARD THAT IS BEING REUSED.
10. ALL CONDUCTOR TERMINATIONS SHALL BE TIGHTENED TO MANUFACTURER RECOMMENDATIONS USING AN APPROVED METHOD.
11. ALL ELECTRICAL EQUIPMENT SHALL BE IDENTIFIED WITH NAMEPLATES, REFER TO SPECIFICATIONS. IN ADDITION, EACH DISCONNECT MUST BE IDENTIFIED WITH A NAMEPLATE. THE NAMEPLATE SHALL BE IDENTIFIED BY CIRCUIT SOURCE THAT SUPPLIES DISCONNECTING MEANS. (11022)

AGENCY APPROVAL DSA#

196

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STRUCTURAL ENGINEER

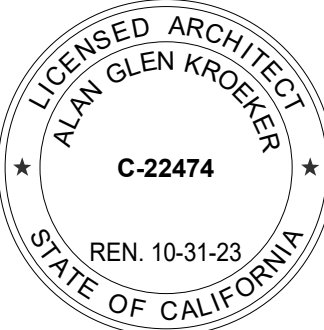
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ARCHITECT STAMP

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REVISIONS

[illegible]

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PROJECT OWNER & TITLE

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Montclair, CA 91763

CHINO BASIN WCD AMPHITHEATER ROOF

4594 San Bernardino St,
Montclair, CA 91763

SHEET TITLE
SINGLE LINE
DIAGRAM & PANEL
SCHEDULES

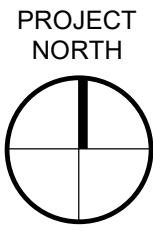
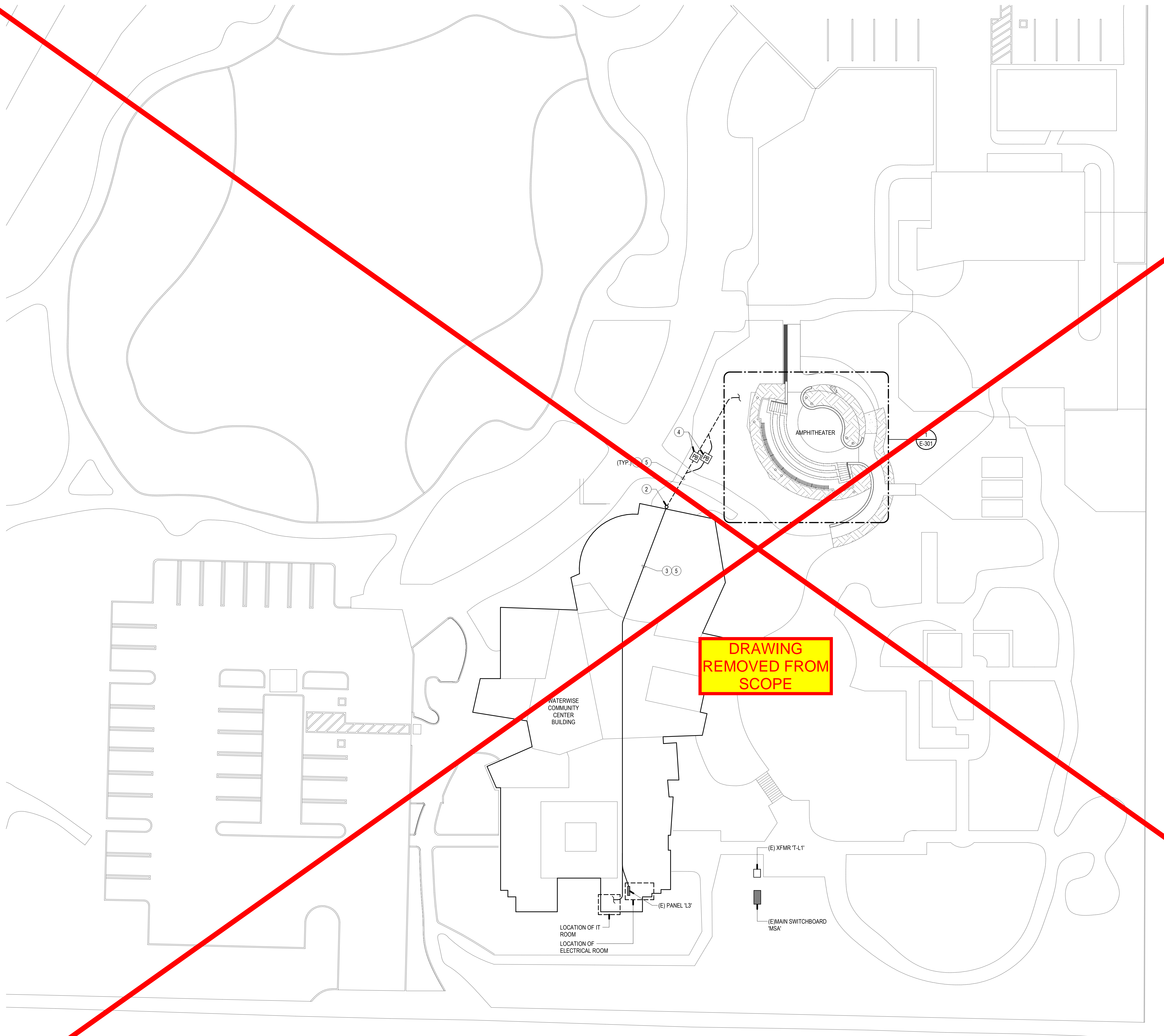
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E-002

DATE: DECEMBER 04, 2024

DATE PLOTTED: 1/29/2025 2:11:00 PM FILE LOCATION: Autodesk Docs://24-209 CBWCD Waterwise/24-209 CBWCD Waterwise CC Amphitheater_MEP_Central_R24.rvt



ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"

1

GENERAL NOTES

- COORDINATE TRENCH ROUTING AND EQUIPMENT LOCATIONS WITH EXISTING CONDITIONS AND NEW WORK.
- ALL SITE BRANCH CIRCUIT WIRING SHALL BE #10 AWG. OR LARGER.
- ALL SITE UNDERGROUND CONDUIT TO BE 1" MIN. UNLESS OTHERWISE NOTED.
- SUPPORT CONDUIT(S) EVERY 10'-0" AND WITHIN 3'-0" OF ANY JUNCTION BOX OR TERMINATION.

CONSTRUCTION NOTES

- SAWCUT, TRENCH AND EXCAVATE AS REQUIRED TO INSTALL CONDUIT AND FEEDERS AS INDICATED. BACKFILL, TAMP AND RESURFACE TO ORIGINAL CONDITION.
- RISE UP CONDUIT ON EXTERIOR WALL AND PENETRATE BUILDING IN ACCESSIBLE CEILING OR ATTIC SPACE. SEAL ALL OPENINGS. PAINT CONDUIT AND ALL ASSOCIATED COMPONENTS TO MATCH SURROUNDING FINISH.
- ROUTE CONDUIT ABOVE ACCESSIBLE CEILING SPACE WHERE REQUIRED.
- PROVIDE AND INSTALL (2) PULLBOXES SIZED PER NEC, (1) LABELED 'ELECTRICAL' AND (1) LABELED 'COMMUNICATION' FOR SEPARATION OF POWER AND FUTURE DATA CABLING.
- PROVIDE THE FOLLOWING CONDUIT INFRASTRUCTURE FOR FUTURE WORK:
 - (2)1" CONDUIT ONLY FROM ELECTRICAL ROOM TO AMPHITHEATER AREA FOR ROUTING OF FUTURE LIGHTING AND POWER CIRCUITS.
 - 2" CONDUIT ONLY FROM IT ROOM TO AMPHITHEATER AREA FOR ROUTING OF FUTURE DATA CABLING.

AGENCY APPROVAL DSAE

19.6

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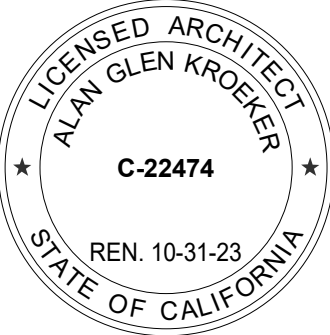
CONSULTANTS

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4594 San Bernardino St
Montclair, CA 91763

**CHINO BASIN WCD
AMPHITHEATER
ROOF**
4594 San Bernardino St,
Montclair, CA 91763

SHEET TITLE

**ELECTRICAL SITE
PLAN**

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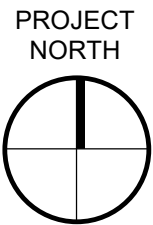
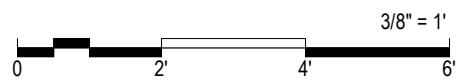
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ELECTRICAL DEMOLITION PLAN

SCALE: 3/8" = 1'-0"

1

GENERAL NOTES

1. REFER TO ELECTRICAL LEGENDS AND NOTES SHEET FOR ADDITIONAL DEMOLITION NOTES.

DEMOLITION NOTES

- ◇ EXISTING ELECTRICAL DEVICE TO REMAIN AND BE PROTECTED IN PLACE.

AGENCY APPROVAL DSAE

19.6

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ROOF**
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SHEET TITLE
**ELECTRICAL
DEMOLITION PLAN
- BUILDING A**

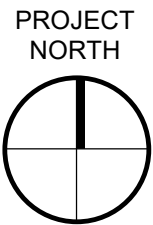
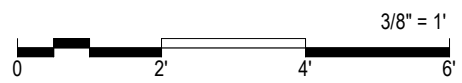
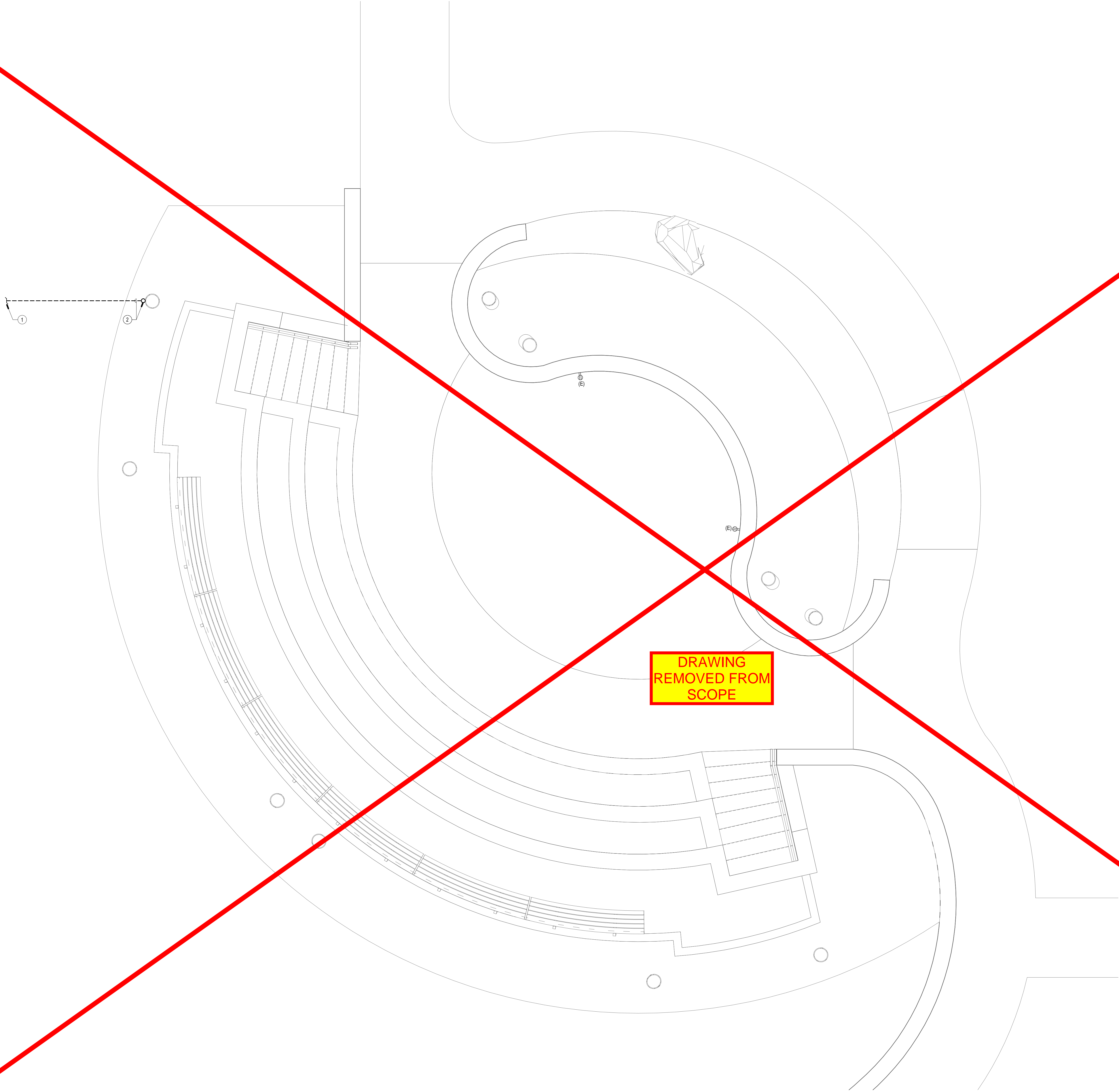
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POWER & SIGNAL PLAN

SCALE: 3/8" = 1'-0"

1

GENERAL NOTES

1. ALL SITE UNDERGROUND CONDUIT TO BE 1" MIN. UNLESS OTHERWISE NOTED.
2. SUPPORT CONDUIT(S) EVERY 10'-0" AND WITHIN 3'-0" OF ANY JUNCTION BOX OR TERMINATION.

CONSTRUCTION NOTES

- 1 REFER TO ELECTRICAL SITE PLAN ON SHEET E-101 FOR CONTINUATION.
- 2 ROUTE (2)1" & (1)2" CONDUIT ONLY TO STRUCTURAL COLUMN FOR ROUTING OF FUTURE LIGHTING/POWER CIRCUITS AND DATA CABLING. RISE UP COLUMN 6" ABOVE GRADE AND CAP FOR FUTURE USE.

AGENCY APPROVAL DSAE

19.6

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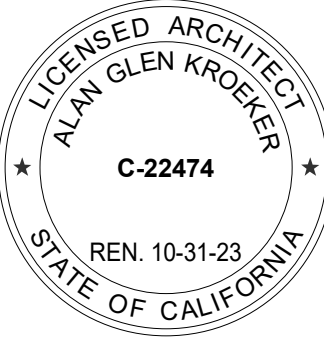
CONSULTANTS

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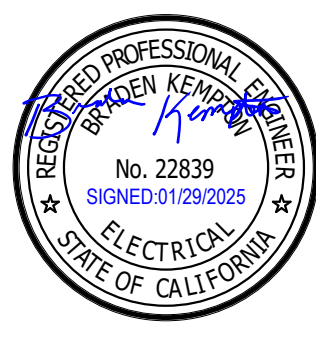
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ARCHITECT STAMP



CONSULTANT STAMP



REVISIONS

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**CHINO BASIN WCD
AMPHITHEATER
ROOF**
4594 San Bernardino St,
Montclair, CA 91763

SHEET TITLE

**POWER & SIGNAL
PLAN - BUILDING A**

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SHEET NO.

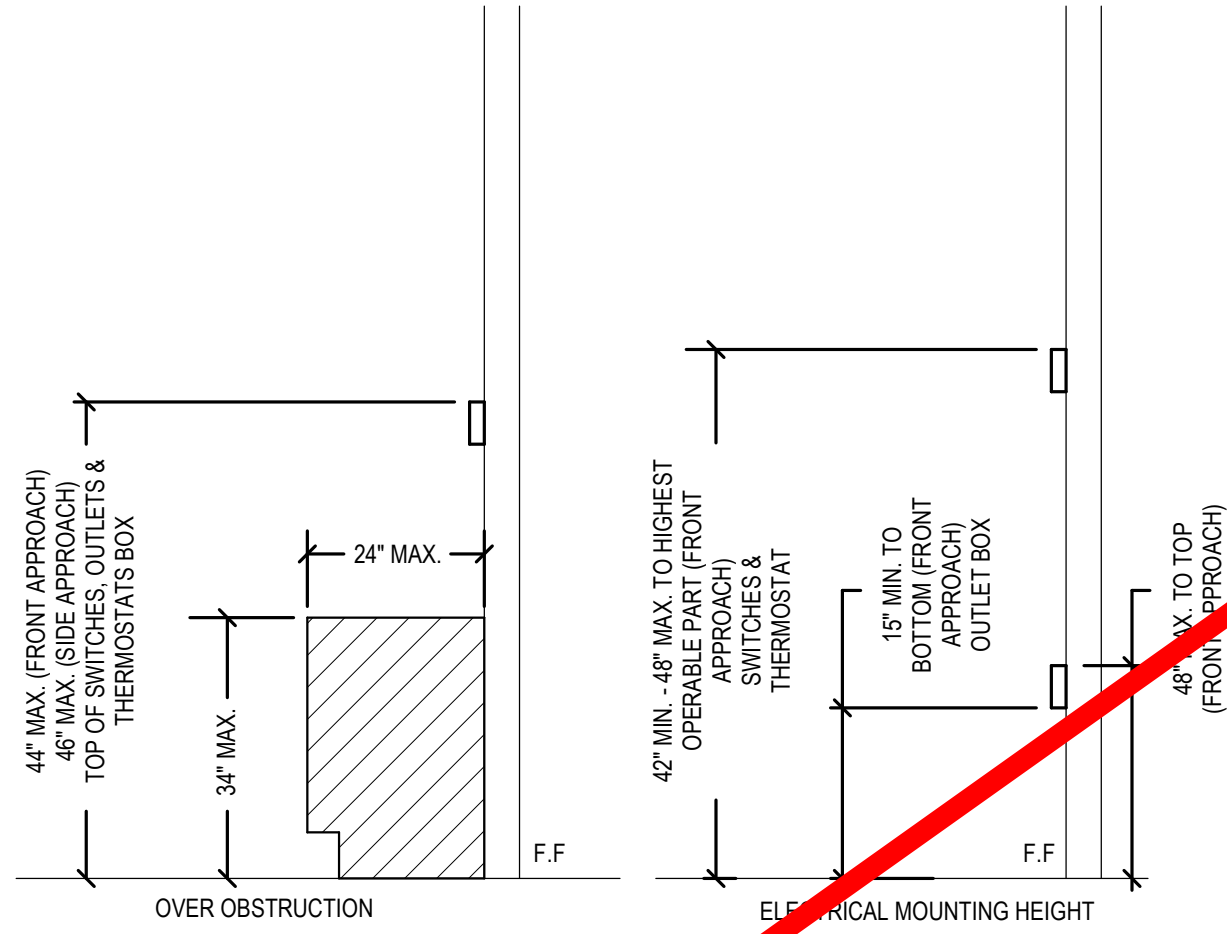
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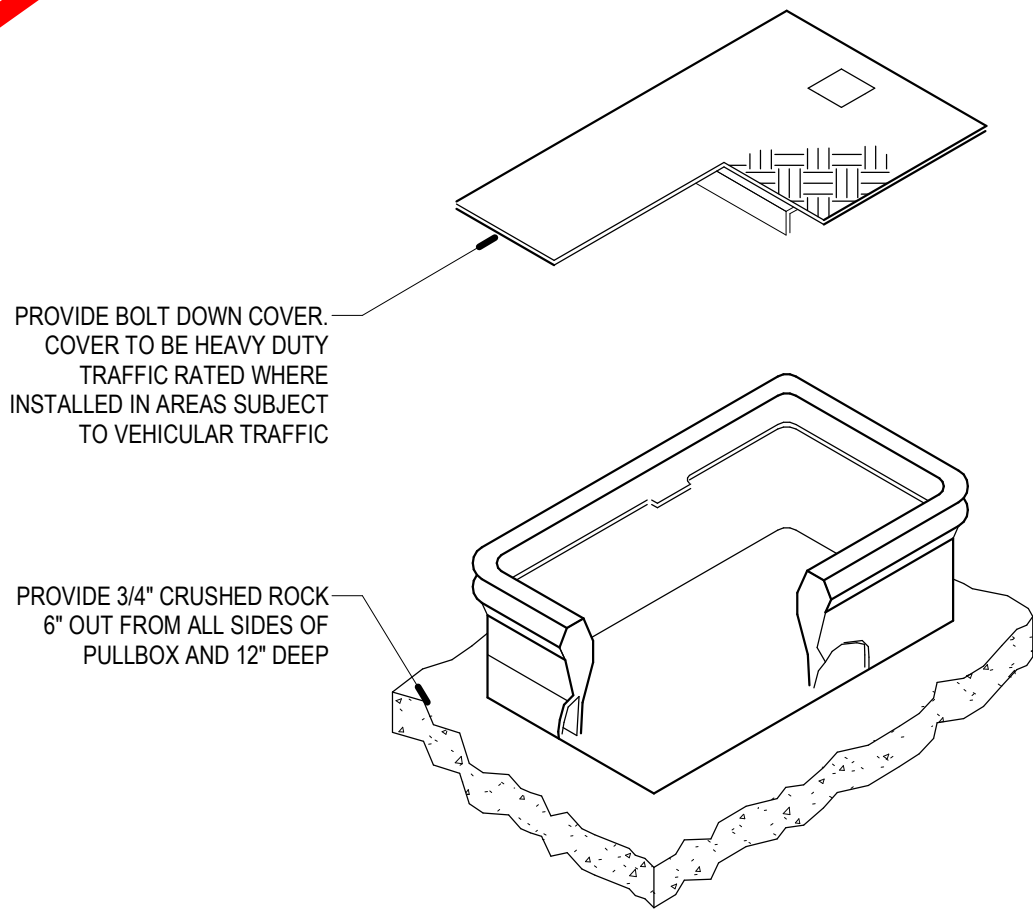
DRAWING
REMOVED FROM
SCOPE



GENERAL NOTES:
1. FORWARD OF FRONT APPROACH FOR DEVICE MOUNTING ABOVE COUNTER
ASSUME THAT DIRECTLY BELOW DEVICE, THE COUNTER HAS A 30\"/>

ACCESSIBLE DEVICE MOUNTING HEIGHT DETAIL

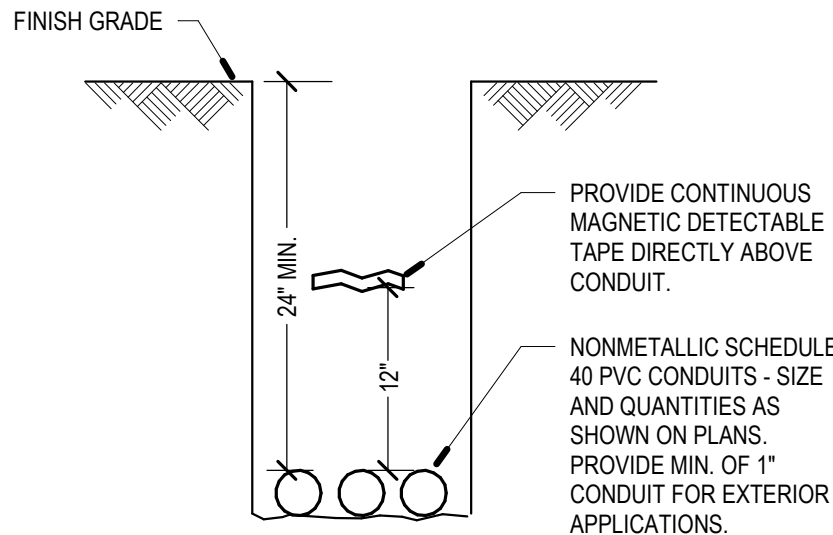
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GENERAL NOTES:
1. PULLBOX TO BE SIZED PER NEC, U.O.N
2. PROVIDE COVER LABELED WITH "POWER" OR "DATA" DESIGNATION

PULLBOX INSTALLATION

2



GENERAL NOTES:
1. PLACE CONDUIT IN TRENCH, FILL, AND COMPACT TO 90%. REPAIR AREA TO MATCH SURROUNDING. BACK FILL IS TO BE FREE OF LARGE ROCK, PAVING MATERIALS, ETC., THAT MAY CAUSE PHYSICAL DAMAGE TO CONDUIT. PROVIDE GRANULAR MATERIAL WITH A SAND EQUIVALENT (SE) GREATER THAN 30 PER COUNTY OF RIVERSIDE STANDARDS.
2. PROVIDE 30\"/>

CONDUIT BURIAL

3

AGENCY APPROVAL DSAE

196

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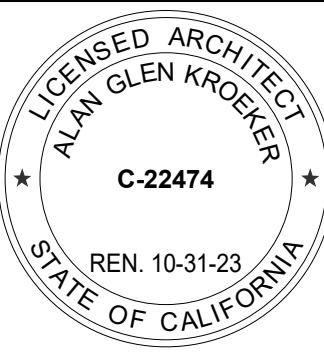
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ARCHITECT STAMP



CONSULTANT STAMP



REVISIONS

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SHEET TITLE

**ELECTRICAL
DETAILS**

DRAWN BY: P. HISHA JOB NUMBER: 023495.01

SHEET NO.

E-401

DATE: DECEMBER 04, 2024

ELECTRICAL SPECIFICATIONS

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. WORK COVERED BY THIS SECTION CONSISTS OF FURNISHING ALL LABOR, EQUIPMENT, SUPPLIES, AND MATERIALS, UNLESS OTHERWISE SPECIFIED, AND IN PERFORMING ALL OPERATIONS NECESSARY FOR THE INSTALLATION OF A COMPLETE AND OPERABLE ELECTRICAL SYSTEM AS REQUIRED BY THESE SPECIFICATIONS AND AS INDICATED ON THE DRAWINGS.
- B. THE CONTRACTOR SHALL EXAMINE ALL DRAWINGS AND SPECIFICATIONS IN A MANNER TO BE FULLY COGNIZANT OF ALL WORK REQUIRED UNDER THIS SECTION.
- C. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS UNLESS OTHERWISE ARRANGED AND SCHEDULE ALL REQUIRED INSPECTIONS FOR THE EXECUTION OF THE WORK UNDER THIS CONTRACT.

1.02 GENERAL REQUIREMENTS

- A. WORK DONE UNDER THIS SECTION SHALL COMPLY WITH THE LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE, NEC (NATIONAL ELECTRICAL CODE), THE STATE OF CALIFORNIA TITLE 24, THE STATE BUILDING STANDARDS, (CSHA) OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, AND TO ANY APPLICABLE LOCAL JURISDICTIONAL REQUIREMENTS IN CASE OF CONFLICT BETWEEN REQUIREMENT, THE MOST RESTRICTIVE SHALL APPLY.

1.03 ELECTRICAL CONTRACTOR'S RESPONSIBILITY

- A. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COMPLETE SET OF DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL CHECK THE DRAWINGS OF THE OTHER TRADES AND SHALL CAREFULLY READ THE ENTIRE SPECIFICATIONS AND DETERMINE HIS RESPONSIBILITIES.
- B. BEFORE SUBMITTING THE BID, THE ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FULLY ACQUANT HIMSELF WITH EXISTING CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL THE EQUIPMENT AND ASSOCIATED WIRING IN SUCH A MANNER AS TO CONFORM WITH THE EXISTING STRUCTURE OF THE BUILDING, AVOID OBSTRUCTIONS, AND MEET APPLICABLE CODE REQUIREMENTS.
- C. THE INTENT OF THESE DRAWINGS IS TO DESCRIBE A COMPLETE AND OPERABLE SYSTEM. WHERE EXISTING CONDITIONS DIFFER FROM DRAWINGS, ADJUSTMENT SHALL BE MADE AND ALLOWANCES INCURRED FOR ALL NECESSARY EQUIPMENT TO COMPLETE ALL PARTS OF THE DRAWINGS AND SPECIFICATIONS. BRING ANY QUESTIONS TO THE ARCHITECT OR ENGINEER'S ATTENTION PRIOR TO BIDDING.
- D. WHEREVER A DISCREPANCY IN QUANTITY OR SIZE OF CONDUIT, WIRE, EQUIPMENT, DEVICES, CIRCUIT BREAKERS, ETC., ARISES ON THE DRAWING AND/OR SPECIFICATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITION NOTED ON DRAWINGS AND/OR IN SPECIFICATIONS TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ENGINEER.

1.04 WORK NOT INCLUDED

- A. CERTAIN LABOR, MATERIALS, OR EQUIPMENT MAY BE FURNISHED UNDER OTHER CONTRACTS BY THE OWNER. WHEN SUCH IS THE CASE, THE EXTENT, SOURCE, AND DESCRIPTION OF THESE ITEMS WILL BE INDICATED ON THE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS. UNLESS OTHERWISE NOTED, ALL LABOR, MATERIALS AND EQUIPMENT FOR THE COMPLETE INSTALLATION OF THE ELECTRICAL WORK SHALL BE PROVIDED UNDER THIS SECTION OF THESE SPECIFICATIONS.

1.05 SPECIAL REQUIREMENTS

- A. THE DRAWINGS INDICATE GENERAL ARRANGEMENT OF CIRCUITS, OUTLETS, LOCATIONS OF MOTOR CONTROLLERS WITH DISCONNECTS, PANELBOARDS, CONDUIT ROUTING, AND OTHER WORK. INFORMATION SHOWN ON THE DRAWINGS IS ESSENTIALLY DIAGRAMMATIC; HOWEVER, RE-CIRCUITING OR RELOCATING PARTS OF ELECTRICAL EQUIPMENT WILL NOT BE PERMITTED WITHOUT SPECIFIC WRITTEN APPROVAL OF THE ENGINEER.

1.06 SUBMITTALS

- A. AFTER AWARD OF THE CONTRACT AND BEFORE ANY MATERIALS ARE DELIVERED TO THE JOB SITE, A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION MUST BE PROVIDED.
- B. SUBMIT TO THE ENGINEER FOR APPROVAL ONE PRINT AND ONE REPRODUCIBLE OF ALL LIGHTING FIXTURES, SWITCHGEAR, PANELBOARDS, CONDUIT, CONDUCTORS, AND PULLBOXES. SHOP DRAWINGS SHALL INCLUDE MANUFACTURER'S PRINTED INFORMATION FOR EACH OF THESE ITEMS IDENTIFIED ON THE DRAWINGS. THE INFORMATION SHALL INCLUDE, AS MINIMUM, MATERIAL DIMENSIONS, WEIGHT, PHASE, VOLTAGE RATINGS, WIRING DIAGRAMS, AND NAMEPLATE DATA.

1.07 STANDARDS AND MATERIALS

- A. ALL MATERIALS SHALL CONFORM WITH THE CURRENT APPLICABLE INDUSTRY STANDARDS, NEMA (NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION), ANSI (AMERICAN NATIONAL STANDARDS INSTITUTE), IPCEA (INSULATED POWER CABLE ENGINEERS ASSOCIATION), IEEE (INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS), NATIONAL ELECTRICAL SAFETY CODE.
- B. UNLESS OTHERWISE INDICATED, ALL MATERIALS SHALL BE UNDERWRITERS LABORATORIES LISTED AND LABELED, OR CERTIFIED BY A NATIONALLY RECOGNIZED TESTING LABORATORY.
- C. WORKMANSHIP AND NEAT APPEARANCE SHALL BE AS IMPORTANT AS THE ELECTRICAL, MECHANICAL EFFICIENCY. DEFECTIVE AND DAMAGED MATERIALS SHALL BE REPLACED OR REPAIRED PRIOR TO FINAL APPROVAL AND ACCEPTANCE. THE DRAWINGS AND SPECIFICATIONS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT THAN CODES, STATUTES, OR ORDINANCES IN EFFECT. APPLICABLE CODES, STANDARDS, ORDINANCES, AND STATUTES TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT OR CONFLICT WITH THE DRAWINGS OR SPECIFICATIONS.

1.08 DELIVERY AND STORAGE OF MATERIALS

- A. THE CONTRACTOR SHALL INVESTIGATE EACH SPACE IN THE BUILDING THROUGH WHICH EQUIPMENT MUST PASS TO RELOCATE TO ITS FINAL LOCATION. IF NECESSARY, THE MANUFACTURER SHALL BE REQUIRED TO SHIP HIS MATERIAL IN SECTIONS, SUITED TO PERMIT PASSING THROUGH SUCH RESTRICTED AREAS IN THE BUILDING.
- B. THE CONTRACTOR SHALL RETAIN IN HIS POSSESSION AND SHALL BE RESPONSIBLE FOR ALL PORTABLE AND DETACHABLE PARTS OF INSTALLATIONS SUCH AS FUSES, KEY LOCKS, ADAPTERS, BLOCKING CLIPS, AND INSERTS UNTIL FINAL COMPLETION OF WORK. THESE PARTS SHALL BE DELIVERED TO THE OWNER UPON COMPLETION OF THE WORK.

PART 2 PRODUCTS

2.01 EQUIPMENT AND MATERIALS

- A. ALL MATERIALS FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL BE NEW, FREE FROM DEFECTS, AND SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE OF THE WORK. SHOULD ANY TROUBLE DEVELOP DURING THEIR PERIOD DUE TO DEFECTIVE MATERIALS OR FAULTY WORKMANSHIP, THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS AND LABOR TO CORRECT THE TROUBLE WITHOUT ANY COST TO THE OWNER. ANY DEFECTIVE MATERIAL OR INFERIOR WORKMANSHIP NOTED AT THE TIME OF INSTALLATION SHALL BE CORRECTED IMMEDIATELY TO THE SATISFACTION OF THE OWNER.
- B. ALL MAJOR EQUIPMENT COMPONENTS SHALL HAVE THE MANUFACTURER'S NAME, ADDRESS, MODEL NUMBER, AND SERIAL NUMBER PERMANENTLY ATTACHED IN A CONSPICUOUS MANNER.

2.02 CONDUIT

- A. PROVIDE RACEWAYS AS INDICATED ON THE DRAWINGS AND AS HEREIN SPECIFIED. CONDUITS SHALL BE RIGID STEEL "SRC" (THICK WALL) GALVANIZED ELECTRICAL METALLIC TUBING "EMT" (THIN WALL), FLEXIBLE STEEL, GALVANIZED, LIQUID-TIGHT, FLEXIBLE STEEL CONDUIT WITH GROUND BOND OR SCHEDULE 40 PVC.
- B. ALL EMPTY UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC UNLESS OTHERWISE INDICATED ON THE DRAWING. ABOVE GROUND EMPTY CONDUITS SHALL BE EMT OR GRC AS REQUIRED BY CODE.
- C. WHERE CONDUIT CROSSES AN EXPANSION JOINT, PROVIDE APPROVED FITTINGS WHICH ALLOW DEFLECTIONS EQUIVALENT TO TWICE THE MOVEMENT ALLOWED BY THE DESIGN.

2.03 CONDUCTORS

- A. PROVIDE A COMPLETE SYSTEM OF CONDUCTORS IN RACEWAY SYSTEMS AS SHOWN ON THE DRAWINGS AND THEN HEREIN SPECIFIED.
- B. LIGHTING AND POWER CONDUCTORS SHALL BE COPPER, 800 VOLT, TYPE THW/THHN, NO. 12 MINIMUM UNLESS OTHERWISE NOTED.
- C. CONTROL CONDUCTORS SHALL BE 600V, TYPE THW/THHN, NO. 14 MINIMUM SIZE UNLESS OTHERWISE NOTED.

2.04 FITTINGS

- A. CONNECTOR, COUPLING, LOCKNUT, BUSHINGS AND CAPS USED WITH RIGID CONDUIT SHALL BE STEEL, THREADED AND GALVANIZED. BUSHINGS SHALL BE INSULATED.
- B. EMT FITTINGS, CONNECTORS AND COUPLINGS SHALL BE STEEL, ZINC, OR CADMIUM PLATED, COMPRESSION TYPE, WITH INSULATED THROAT.
- C. FLEXIBLE STEEL CONDUIT CONNECTORS SHALL BE TWIST-IN-TYPE WITH INSULATED THROAT. THE FINISH SHALL BE ZINC OR CADMIUM PLATING.
- D. EMT CONDUIT FITTINGS SHALL BE THE COMPRESSION TYPE; SET SCREW FITTINGS SHALL NOT BE USED.

2.05 JUNCTION AND PULL BOXES

- A. FOR INTERIOR DRY LOCATIONS, BOXES SHALL BE GALVANIZED ONE-PIECE DRAWN STEEL, KNOCKOUT TYPE WITH REMOVABLE, MACHINE SCREW SECURED COVERS.
- B. FOR EXTERIOR WET LOCATIONS, BOXES SHALL BE NEMA 3R OR NEMA 4 RATED, GASKET MACHINE SCREW SECURED COVERS.
- C. IN-GROUND PULLBOXES SHALL BE CONCRETE ELECTRICAL PULL BOX WITH LID APPROPRIATE FOR INSTALLATION LOCATION. SIZE PULLBOX PER NEC REQUIREMENTS.
- D. ALL BOXES SHALL BE SIZED FOR THE NUMBER AND SIZES OF CONDUCTORS AND CONDUITS ENTERING THE BOX AND EQUIPPED WITH PLASTER RINGS WHERE REQUIRED.

2.06 OUTLET BOXES

- A. FOR OUTLET BOXES SHALL BE GALVANIZED, ONE-PIECE DRAWN STEEL, KNOCKOUT TYPE EQUIPPED WITH 3/8" FUTURE STUDS AND PLASTER RINGS WHERE REQUIRED.
- B. FOR CONVENIENCE OUTLETS, WALL SWITCHES, OR OTHER DEVICES, OUTLET BOXES SHALL BE GALVANIZED ONE-PIECE DRAWN STEEL, KNOCKOUT TYPE 4"x4"x1-1/2" MINIMUM.
- C. FOR LOCATIONS WHERE STANDARD BOXES ARE NOT SUITABLE, SPECIAL BOXES SHALL BE DESIGNED TO FIT SPACE OR MEET OTHER REQUIREMENTS AND SUBMITTED FOR APPROVAL.

2.07 SWITCHES

- A. ALL DEVICES SHALL CONFORM TO NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA) STANDARDS AND SHALL BE UNDERWRITERS LABORATORIES, INC., (UL) LISTED AND LABELED AND SHALL BE "SPECIFICATION GRADE" MEETING THE REQUIREMENTS OF FEDERAL SPECIFICATION WS-886-E, FOR SWITCHES.
1. WALL SWITCHES SHALL BE SPECIFICATION COMMERCIAL GRADE MINIMUM, FULLY ENCLOSED, QUIET-TYPE TUMBLER SWITCHES RATED 20 AMPERES, 120/277-VOLT, BAKELITE OR COMPOSITION, BACK AND SIDE WIRED, BUMPER PAD, FULL RATING FOR INDUCTIVE OR NON-INDUCTIVE LOADS AND INCANDESCENT OR FLUORESCENT LIGHTING LOADS.
2. SINGLE POLE SWITCHES: G.E. 98511, HUBBELL #1221, ARROW #1991 OR PASS & SEYMOUR 20AC1.
3. THREE-WAY QUIET SWITCHES: G.E. 98531, HUBBELL #1223, ARROW #1993 OR PASS & SEYMOUR 20AC3.
4. WALL SWITCH AND PILOT LIGHTS SHALL BE FLUSH MOUNTED COMBINATION WALL TYPE WITH SWITCH AND PILOT LIGHT EQUIPPED WITH A 6-WATT, 125-VOLT CANDELABRA BASE LAMP. THE PILOT LIGHT SHALL HAVE A GREEN JEWEL WITH BRASS RIM FLUSH MOUNTED IN THE WALL PLATE.
5. ALL SWITCHES SHALL BE OF THE SAME MANUFACTURE.
6. NORMAL SWITCH COLOR IS WHITE APPROVED BY ARCHITECT/OWNER. SWITCHES CONTROLLING CIRCUITS CONNECTED TO EMERGENCY POWER SOURCE SHALL BE RED.
7. 30 AMP MOTOR RATED SNAP SWITCHES SHALL BE LEVITON #8302-DS. PROVIDED IN NEMA 1 OR 3R ENCLOSURE AS SHOWN ON DRAWING.

2.08 SENSOR SWITCH (MOTION SENSOR)

1. WALL SENSOR SWITCH SHALL BE WATT STOPPER DUAL TECHNOLOGY OCCUPANCY SENSOR LEVITON MODEL #0SSMD-GD FOR SINGLE POLE SWITCHING & LEVITON MODEL #0SSMD-GD FOR DUAL SWITCHING.
2. CEILING SENSOR SWITCH SHALL BE WATT STOPPER DUAL-TECHNOLOGY MODE.
3. PROVIDE 120/277V CEILING SENSOR POWER PACK INSTALLED IN J-BOX NEXT TO LIGHTING CIRCUIT.

2.08 RECEPTACLES

- A. DUPLEX RECEPTACLES SHALL BE SPECIFICATION GRADE, 20 AMPS, 125 VOLTS, 3-WIRE, SIDE-WIRED WITH BINDING SCREWS, PARALLEL SLOTS, U-GROUND, PLASTER GARS AND CAPTIVE MOUNTING SCREWS. BODY SHALL BE PHENOLIC, PLASTIC, OR BAKELITE. RECEPTACLES SHALL BE HEAVY-DUTY, 3-BLADE CURRENT CARRYING CONTACT AND DOUBLEWIDE FLAT BLADE GROUND CONTACTS. PROVIDE ARROW HART 5242-HUBBELL, 5242-L OR LEVITON 5242-L. INSTALL GROUND PIN UP.
- B. SINGLE RECEPTACLES SHALL BE SPECIFICATION GRADE, GROUNDING TYPE, SIDE-WIRED WITH BINDING SCREWS, AND SHALL HAVE STANDARD SIZE VORY BAKELITE BASE. FOR CIRCUITS CONSISTING OF ONE SINGLE RECEPTACLE ONLY, AMPERE RATING OF RECEPTACLE SHALL BE THE SAME AS CIRCUIT BREAKER OR FUSE. FOR RECEPTACLES RATED 15 AMPS/125 VOLTS, PROVIDE NEMA 5-15R, ARROW-HART 5251-L. FOR RECEPTACLES RATED 20 AMPS / 125 VOLTS, PROVIDE NEMA 5-20R, ARROW-HART 521-L, OR EQUAL. INSTALL GROUND PIN UP.

2.09 DEVICE PLATES

1. PROVIDE PLATES FOR ALL SWITCHES, RECEPTACLES, JUNCTION BOXES, TELEPHONE AND OTHER OUTLETS.
2. PROVIDE ENGRAVED OR ETCHED PLATES FOR ALL LOCK SWITCHES, PILOT SWITCHES, SWITCHES FROM WHICH EQUIPMENT OR CIRCUIT CONTROLLED CANNOT BE READILY SEEN, THREE OR MORE SWITCHES UNDER A COMMON PLATE AND FOR SWITCHES AS INDICATED.
3. STAINLESS STEEL PLATES SHALL BE AMERICAN IRON AND STEEL INSTITUTE (AISI) TYPE 302, WITH BEVELED EDGES, 0.040" THICK WITH SATIN SMOOTH FINISH. "SMOOTHE", HUBBELL #9701 SERIES.
4. PLASTIC COVER PLATE SHALL BE HIGH IMPACT THERMOPLASTIC, HIGH STRENGTH, SCRATCH-RESISTANT, SMOOTH AND SELF-EXTINGUISHING, HUBBELL "TY" SERIES OR PASS & SEYMOUR RP SERIES.
5. WHERE OUTLETS ARE INDICATED TO BE WEATHERPROOF, PROVIDE AN AISI TYPE 302 STAINLESS WITH DOUBLE HINGED COVERS, PASS & SEYMOUR #WPD-8.
6. GALVANIZED STEEL PLATES SHALL BE SQUARE OR RECTANGULAR AND HOT DIPPED GALVANIZED OR SHERARDIZED, BEVELED EDGES AND 0.040" THICK. GALVANIZED STEEL PLATES SHALL BE USED IN UTILITY AREA.
7. PROVIDE PLATES EQUIPPED WITH CLOSE FITTING OPENINGS FOR THE EXACT DEVICE TO BE USED. PROVIDE PLATES FOR TELEPHONE OUTLETS EQUIPPED WITH BUSHED OPENINGS.
8. REFER TO SECTION 3.08 FOR LABELING OF PLATES.
9. COVER PLATES ON PRESSED STEEL OUTLET BOXES IN FURRED AREAS, ATTICS, ETC., OR EXPOSED IN MECHANICAL EQUIPMENT ROOMS SHALL BE OF THE SAME MATERIAL AS THE OUTLET BOX.
10. COVER PLATES IN LOCATIONS CONCEALED FROM PUBLIC VIEW SHALL HAVE THE CIRCUIT NUMBERS AND SOURCE FEED POINT HAND LABELED WITH MARKING BLACK PEN (PERMANENT MARKER); SEE SECTION 3.08 FOR LABELING.
11. PROVIDE PLASTIC COVER PLATES UNLESS NOTED OTHERWISE.
- 2.10 PANELBOARDS
- A. FURNISH AND INSTALL ALL BRANCH CIRCUIT PANELBOARDS AS HEREINAFTER SPECIFIED AND AS SHOWN ON THE DRAWINGS. PANELBOARDS SHALL BE OF THE DEAD FRONT SAFETY TYPE EQUIPPED WITH THE THERMAL MAGNETIC 40°C CIRCUIT BREAKERS.
- B. CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE, RATED MINIMUM 10,000 AMPS RMS SYMMETRICAL INTERRUPTING CAPACITY AND SHALL BE THE NUMBER OF POLES AND CURRENT CAPACITY AS INDICATED ON THE PANEL SCHEDULE. BRANCH CIRCUIT PANELBOARDS SHALL BE SQUARE-D OR Eaton/CUTLER HAMMER WITH LUGS UL LISTED FOR USE WITH 75°C WIRE.
- C. DOOR SHALL HAVE A PLASTIC COVERED DIRECTORY FRAME WITH A TYPED IDENTIFICATION CARD FOR ALL CIRCUIT AND PANEL NUMBERS FOR BRANCH CIRCUIT PANELBOARDS.
- D. PROVIDE NAMEPLATE FOR ALL PANELBOARDS, ENGRAVED WHITE LETTERS ON BLACK BACKGROUND. INSTALL NAME PLATES ON THE TRIM ABOVE DOOR.
- E. ALL WIRING SHALL BE NEATLY ARRANGED AND LACED TOGETHER.
- F. BUS BARS SHALL BE RECTANGULAR IN CROSS SECTION CONSTRUCTED OF COPPER, NEUTRAL, AND GROUND BUSES SHALL BE FULL SIZE.

- 2.11A INTERIOR LIGHTING FIXTURES (NOT USED.)
- 2.11B EXTERIOR LIGHTING FIXTURES (NOT USED.)
- 2.12 LOW VOLTAGE SWITCHGEAR (NOT USED.)
- 2.13 CIRCUIT AND MOTOR DISCONNECTS

- A. DISCONNECT (SAFETY) SWITCHES SHALL BE FUSED, HEAVY DUTY TYPE SWITCHES MEETING NEMA SPECIFICATIONS. SWITCHES SHALL BE PROVIDED WITH PROTECTION TYPE FUSE BLOCKS. PROVIDE SWITCHES WITH THE NUMBER OF POLES, THE VOLTAGE, CURRENT AND HORSEPOWER RATINGS AS REQUIRED. PROVIDE EXTERNALLY OPERABLE QUICK-MAKE, QUICK-BREAK TYPE MECHANISM WITH COVER INTERLOCK AND PADLOCKABLE IN EITHER THE OPEN OR CLOSED POSITION.
- B. SWITCHES SHALL BE NEMA 3R (RAIN TIGHT ENCLOSURE) WHERE INDICATED TO BE OUTDOORS. WEATHERPROOF.
- C. PROVIDE NAMEPLATE INDICATING EQUIPMENT SERVED. ALL GENERAL SNAP SWITCHES OPERATING MOTOR LOADS SHALL BE HORSEPOWER RATED OR BE RATED AT LEAST 125% OF THE FULL LOAD CURRENT.
- 2.14 TRANSFORMERS (NOT USED.)
- 2.15 ELECTRICAL CONNECTIONS (NOT USED.)
- 2.16 SUPPORTING DEVICES

- A. ALL EQUIPMENT CONDUITS SHALL BE SUPPORTED, ANCHORED AND BRACED IN ACCORDANCE WITH THE MOST STRINGENT CODES AND REQUIREMENTS. COMPLY WITH CHAPTER 23 OF THE LATEST CBC (CALIFORNIA BUILDING CODE).

PART 3 EXECUTION

3.01 WORKMANSHIP AND COMPLETION OF INSTALLATION

- A. WORKMANSHIP AND NEAT APPEARANCE SHALL BE AS IMPORTANT AS THE ELECTRICAL AND MECHANICAL EFFICIENCY. DEFECTIVE AND DAMAGED MATERIALS SHALL BE REPLACED OR REPAIRED PRIOR TO FINAL INTERPRETATION. THIS INCLUDES: ANY DEFICIENCY PERTAINING TO EITHER WORKMANSHIP OR MATERIALS FOUND BY THE INSPECTOR SHALL BE CORRECTED WITHOUT ADDITIONAL COST TO THE OWNER.
- B. THE CONTRACTOR SHALL MAINTAIN ON JOB SITE A SET OF THE WORKING DRAWINGS WHICH SHALL BE UPDATED DAILY. IN DETAIL FOR WORK ACCOMPLISHED. UPON COMPLETION OF THE WORK, A SET OF REPRODUCIBLE CONTRACT DRAWINGS SHALL BE OBTAINED FROM THE GENERAL CONTRACTOR AND ALL CHANGES AS NOTED ON THE RECORD SET OF PRINTS SHALL BE INCORPORATED THEREON WITH RED INK IN A NEAT, LEGIBLE, UNDERSTANDABLE AND PROFESSIONAL MANNER.
- C. ALL EQUIPMENT AND MATERIALS CONNECTED WITH THIS PROJECT SHALL BE INSTALLED COMPLETE, THOROUGHLY CLEANED, AND ALL RESIDUE REMOVED FROM INSIDE SURFACES. EXTERIOR SURFACES OF ALL MATERIAL AND EQUIPMENT SHALL BE CLEANED AND DELIVERED IN A PERFECT, UNBLEMISHED CONDITION.
- D. UPON COMPLETION OF THE INSTALLATION AND AS A CONDITION OF ITS ACCEPTANCE FURNISH ONE COPY OF THE FINAL INSPECTION CERTIFICATE TO THE OWNER.
- 3.02 PREPARATION COORDINATION
- A. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH ALL OTHER CONTRACTORS FURNISHING LABOR, MATERIALS AND WORK, SO THAT THE WORK AS WHOLE SHALL BE EXECUTED AND COMPLETED WITHOUT CONFLICT OR DELAY.
- B. EXAMINE THE DRAWINGS AND SPECIFICATIONS AND DETERMINE THE WORK TO BE PERFORMED BY THE ELECTRICAL, MECHANICAL, AND OTHER TRADES. PROVIDE THE TYPE AND AMOUNT OF ELECTRICAL MATERIALS AND EQUIPMENT NECESSARY TO PLACE THIS WORK IN PROPER OPERATION, COMPLETELY WIRED, TESTED AND READY FOR USE. THIS SHALL INCLUDE ALL CONDUIT, WIRE, DISCONNECTS, RELAYS, AND OTHER DEVICES FOR THE REQUIRED OPERATION. SEQUENCE OF ALL ELECTRICAL, MECHANICAL, AND OTHER SYSTEMS OR EQUIPMENT.
- C. PERFORM ALL WORK IN A MANNER WHICH WILL NOT CAUSE UNNECESSARY INCONVENIENCE OR DANGER TO THE OCCUPANTS, NOR INTERFERE WITH THE ACTIVITIES OF THE BUILDING.

- A. SCHEDULE EACH POWER INTERRUPTION WITH OWNER, AND SHALL PROVIDE AT LEAST TWO WEEKS NOTICE OF COMPLETION.

3.03 WIRING IN ACCORDANCE WITH DRAWING DETAILS.

3.04 CORE CUTTING, DRILLING, AND PATCHING

- A. NO HOLES WILL BE ALLOWED IN ANY STRUCTURAL MEMBERS WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT, A STRUCTURAL ENGINEER AND GENERAL CONTRACTOR.

3.05 INSTALLATION

- A. WORKMANSHIP IS TO BE NEAT, BY EXPERIENCED WORKMEN WITH ADEQUATE SUPERVISION, AND IN LINE WITH NORMAL INDUSTRY WORK PRACTICES.
- B. MAINTAIN WORKING CLEARANCE AROUND ELECTRICAL EQUIPMENT, IN ACCORDANCE WITH CODE REQUIREMENTS AS A MINIMUM.
- C. WHERE LIGHTING FIXTURES AND OTHER ELECTRICAL ITEMS ARE SHOWN IN CONFLICT WITH LOCATIONS OF STRUCTURAL MEMBERS AND MECHANICAL OR OTHER EQUIPMENT, FURNISH AND INSTALL ALL REQUIRED SUPPORTS AND WIRING TO CLEAR THE ENCROACHMENT.
- D. VERIFY LOCATION OF EACH OUTLET FOR POWER, SIGNAL, TELEPHONE/DATA, AND EACH LIGHTING FIXTURE WITH ARCHITECT PRIOR TO ROUGH-IN. INCLUDE IN BID COST OF RELOCATING EACH ITEM WITHIN TEN-FEET RADIUS OF ITS INDICATED LOCATION.
- E. ALL CONDUIT TO BE RUN CONCEALED UNLESS OTHERWISE NOTED. ALL CONDUITS SHALL BE ROUTED OVERHEAD IN CEILING SPACES. NO CONDUITS SHALL BE PERMITTED IN CONCRETE SLAB, MASONRY WALLS UNLESS SPECIFICALLY SO INDICATED. CONDUIT SHALL BE RUN SO AS NOT TO INTERFERE WITH OTHER PIPING FIXTURES OR EQUIPMENT.
- F. WHERE ALLOWED, EXPOSED CONDUIT RUNS SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO WALLS, STRUCTURAL MEMBERS, OR INTERSECTION OF VERTICAL PLANES AND CEILINGS.
- G. ALL ELECTRICAL CONDUITS AND OTHER ELECTRICAL RACEWAYS PASSING THROUGH FIRE RATED CEILINGS, SLABS, CABLE TRAYS, WALLS AND PARTITIONS SHALL BE SEALED TO PREVENT THE SPREAD OF FIRE, SMOKE, AND GASSES. USE A UL LISTED AND APPROVED FIRE-STOP MATERIAL, EQUAL TO RATING OF A WALL OR A FLOOR SLAB PENETRATED; INSTALLATION OF FIRE-STOP MATERIAL SHALL BE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
- H. UNLESS WRITTEN PERMISSION IS GRANTED BY THE ARCHITECT, NO MATERIAL SHALL BE MOUNTED ON THE EXTERIOR WALLS OR PARAPET TOP OF THE BUILDING.
- I. ALL ROTATING ELECTRICAL EQUIPMENT SHALL BE SUPPLIED WITH A FLEXIBLE, LIQUID-TIGHT CONDUIT WITH APPROPRIATE SLACK AND SHALL NOT EXCEED THIRTY-SIX (36) INCHES.
- J. ALL POWER WIRING SHALL BE INSTALLED IN CONDUIT.
- K. TELEPHONE WIRES SHALL BE PLENUM RATED CABLE FOR MOUNTING IN CEILING SPACES WITHOUT CONDUIT UNLESS OTHERWISE NOTED.
- L. ALL WIRES FOR ALL SYSTEMS SHALL BE CONTINUOUS FROM SWITCH TO TERMINAL OR FURTHEST OUTLET. NO JOINTS SHALL BE MADE EXCEPT IN PULL, JUNCTION OR OUTLET BOXES, OR IN PANEL OR SWITCHBOARD GUTTERS.
- M. ALL RECEPTACLE, CONTROL DEVICE, AND SWITCH MOUNTING HEIGHTS SHALL BE COORDINATED WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.

3.06 GROUNDING

- A. ALL EQUIPMENT SHALL BE PROPERLY GROUNDED AS INDICATED ON DRAWINGS AND AS REQUIRED BY THE LATEST EDITION OF APPLICABLE CODES.
- B. FURNISH AND INSTALL ALL GROUNDING CONDUCTORS, CONDUIT AND CLAMPS. THE SIZE OF THE GROUNDING CONDUCTORS SHALL BE NOT LESS THAN THAT SPECIFIED IN THE NEC.
- C. BUILDING GROUNDING SYSTEM RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS.
- D. EACH BRANCH CIRCUIT SHALL BE EQUIPPED WITH CODE SIZE GREEN GROUND, EQUIPMENT WIRE (PER NEC 250-95) (NOT INDICATED ON DRAWINGS) WITHIN THE SAME CONDUIT FOR ALL CIRCUITS OF PANELBOARDS.

3.07 BRANCH CIRCUITS

- A. NO MORE THAN THREE BRANCH CIRCUITS PERMITTED IN ONE CONDUIT UNLESS INDICATED OTHERWISE.

3.08 IDENTIFICATION

- A. THE FOLLOWING ITEMS SHALL BE EQUIPPED WITH NAMEPLATES:
1. ALL MOTORS, MOTOR STARTERS, CONTROL PANELS, MOTORS CONTROL, REMOTE STATIONS.
2. ALL DISCONNECT AND SAFETY SWITCHES, MAIN DISTRIBUTION PANEL FEEDER OVERCURRENT DEVICES AND SPARES, CIRCUIT EQUIPMENT IN SEPARATE ENCLOSURES.
3. SPECIAL ELECTRICAL SYSTEMS SHALL BE PROPERLY IDENTIFIED AT JUNCTION AND PULL BOXES.
4. ALL BRANCH CIRCUIT PANEL BOARDS SHALL HAVE IDENTIFYING ENGRAVED PLASTIC NAMEPLATES. ALSO, PROVIDE A TYPED DIRECTORY CARD FOR EACH BRANCH CIRCUIT PANELBOARD. THE CARD IS TO BE PLACED ON THE INTERIOR SIDE OF THE PANELBOARD DOOR BEHIND A CLEAR PLASTIC SHIELD. THE CARD SHALL IDENTIFY EACH CIRCUIT BY NUMBER, LOAD, AND LOCATION.

5. IN GENERAL, EQUIPMENT SHALL BE IDENTIFIED AS DESIGNATED ON THE ELECTRICAL DRAWINGS. NAMEPLATES FOR PANELBOARDS AND SWITCHBOARDS SHALL INCLUDE THE PANEL DESIGNATION, VOLTAGE AND PHASE OF THE SUPPLY AND THE SOURCE PANEL NAME AND CIRCUIT NUMBER (INCLUDE LOCATION IF SOURCE IS NOT WITHIN SIGHT). THE NAME OF THE MACHINE SHALL BE THE SAME AS THE NAME USED ON ALL MOTOR STARTERS, DISCONNECTS, AND P.B. STATION NAMEPLATES FOR THAT MACHINE.

B. NAMEPLATES SHALL BE FABRICATED AS FOLLOWS:

1. NAMEPLATE MATERIALS SHALL CONSIST OF 3-PLY, 1/16" LAMINATED PLASTIC WITH WHITE CORE FOR LETTERING AND BLACK BACKGROUND.
2. CAPITAL LETTERS SHALL BE USED.
3. NAMEPLATES SHALL BE FASTENED WITH CADMIUM-PLATED SELF-TAPPING NO. 6 SCREWS 1/4" LONG.
4. THE MINIMUM SIZE OF ALL NAME PLATES AND LETTERING SHALL BE 3/4" HIGH BY 2" LONG WITH 1/4" LETTERS.

3.09 PROTECTION

- A. USE ALL MEANS NECESSARY TO PROTECT THE WORK AND MATERIALS FROM LOSS DURING AND AFTER INSTALLATION, AND PROVIDE ADEQUATE AND PROPER STORAGE FACILITIES DURING THE PROGRESS OF THE WORK. PROVIDE FOR THE SAFETY AND GOOD CONDITION OF ALL WORK UNTIL FINAL ACCEPTANCE OF THE WORK BY THE OWNER. REPLACE ALL DAMAGE OR DEFECTIVE WORK, MATERIAL, AND EQUIPMENT AT NO EXPENSE TO THE OWNER BEFORE REQUESTING FINAL ACCEPTANCE.

3.10 CLEANING OF EQUIPMENT, MATERIAL, AND PREMISES

- A. SITE SHALL BE LEFT BROOM CLEAN AFTER COMPLETION OF WORK EACH DAY. UPON COMPLETION OF THE WORK, LEAVE THE PREMISES CLEAN OF ALL DIRT AND DEBRIS.

- B. ALL EQUIPMENT AND MATERIAL CONNECTED WITH THIS PROJECT SHALL BE INSTALLED, COMPLETE, THOROUGHLY CLEANED, AND ALL RESIDUE REMOVED FROM INSIDE SURFACES. EXTERIOR SURFACES OF ALL MATERIAL AND EQUIPMENT SHALL BE CLEANED AND DELIVERED IN A PERFECT, UNBLEMISHED CONDITION.

3.11 HANDLING OF WIRE AND CABLE

- A. HANDLE WIRE AND CABLE SO AS TO AVOID DAMAGE TO CONDUCTORS AND TAKE EXTRA PRECAUTION TO AVOID SHARP BENDING OR SCORING OF THE CABLE. CABLE SHALL NOT BE LAID NOR DRAGGED UPON THE GROUND.

- B. THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND REPLACE AT OWNERS EXPENSE ALL WIRE AND CABLE DAMAGED DUE TO IMPROPER HANDLING, AND SHALL PAY FOR THE NEW WIRE OR CABLE.

3.12 TESTING AND INSPECTIONS

- A. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND ARRANGE ALL REQUIRED INSPECTIONS FOR THE EXECUTION OF THE WORK UNDER THIS CONTRACT.
- B. THE CONTRACTOR SHALL REPLACE OR REPAIR OR DEFECTIVE EQUIPMENT OR WORK.
- C. ALL CIRCUITS SHALL BE TESTED FOR CONTINUITY AND CIRCUIT INTEGRITY BY THE CONTRACTOR. ADJUSTMENTS SHALL BE MADE FOR CIRCUITS NOT COMPLYING WITH TESTING CRITERIA.

- D. THE CONTRACTOR SHALL FURNISH ALL INSTRUMENTS AND PERFORM ANY ADDITIONAL TESTS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. CONTRACTOR SHALL ALSO CORRECT ALL FAILURES AND REPLACE ANY DAMAGED PORTIONS OF THE WORK RESULTING FROM THOSE TESTS. THE COST OF THE FOREGOING ITEMS SHALL BE PAID BY THE CONTRACTOR.

- E. THE CONTRACTOR SHALL FURNISH THE OWNER CERTIFICATES OF INSPECTION AND APPROVAL BY THE ELECTRICAL INSPECTION AUTHORITY ON ALL WORK COMPLETED AS REQUIRED.

- F. CONTRACT DRAWINGS AND SPECIFICATIONS, GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS, ELECTRICAL PROVISIONS AND DIVISION SPECIFICATION SECTIONS APPLY TO WORK OF THIS SECTION.

3.13 TELEPHONE AND DATA

- A. PROVIDE AND INSTALL COMPLETE SYSTEM OF CONDUIT WITH PULL LINES, BACKBOARDS, EQUIPMENT RACK, PULL BOXES, JUNCTION BOXES, OUTLET BOXES, AND PLASTER RINGS, FOR TELEPHONE/DATA SYSTEMS, TO BE INSTALLED AS PART OF THIS BUILDING CONTRACT.

- B. PROVIDE OVERHEAD CONDUIT CONNECTIONS BETWEEN THE MAIN TELECOM ROOM AND THE NETWORK RACK.

- C. A FIRE RATED PLYWOOD BACK-BOARD SHALL BE PROVIDED OVER THE BACK OF THE TELEPHONE ROOM AS SHOWN ON THE DRAWINGS. PROVIDE NATIONAL ELECTRICAL CODE (NEC) SIZED GROUND CONDUCTOR FROM THE TELEPHONE BACKBOARD TO MAIN BUILDING GROUNDING SYSTEM.

- D. THE TELEPHONE AND DATA CONDUITS SHALL BE FROM OUTLET BOX TO 6" ABOVE THE ACCESSIBLE CEILING SPACE. CONDUIT RUNS OVER 200 FEET IN LENGTH, OR WITH MORE THAN TWO 90 DEGREE BENDS, SHALL BE PROVIDED WITH ACCESSIBLE PULL BOXES OF SIZES AS APPROVED BY THE OWNER.

- E. PULLWIRES SHALL BE INSTALLED IN ALL TELEPHONE/DATA CONDUITS CONTINUOUS AND WITHOUT SPLICES, PROJECTING 36 INCHES OUT OF EACH END OF CONDUIT/OUTLET BOX. EQUIP ALL JUNCTION BOXES WITH PLASTER RINGS.

AGENCY APPROVAL DSAF

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ELECTRICAL
STATE OF CALIFORNIA

REVISIONS

#	NO.	DATE	DESCRIPTION

THE ARCHITECT DOES NOT REPRESENT THAT THESE PLANS OR THE SPECIFICATIONS ARE SUITABLE FOR ANY SITE OTHER THAN THE ONE FOR WHICH THEY WERE SPECIFICALLY PREPARED. THE ARCHITECT DISCLAIMS RESPONSIBILITY FOR THESE PLANS AND SPECIFICATIONS IF THEY ARE USED IN WHOLE OR IN PART AT ANY OTHER SITE. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.

PROJECT OWNER & TITLE

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CONSERVATION DISTRICT
4594 San Bernardino St
Montclair, CA 91763

CHINO BASIN WCD
AMPHITHEATER
ROOF

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SHEET TITLE

ELECTRICAL
SPECIFICATIONS

DRAWN BY: RLS/USA JOB NUMBER: 023495.01

SHEET NO.

E-501

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