ELECTRICAL ABBREVIATION LIST

(THIS IS A MASTER LIST, NOT ALL ABBREVIATIONS MAY APPEAR ON DRAWINGS.)

+18"	MOUNTING HEIGHTS ARE TO CENTERLINE OF DEVICE ABOVE FINISH FLOOR OR FINISH GRADE
A	AMPERE
AFF	ABOVE FINISH FLOOR
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AHJ	AUTHORITY HAVING JURISDICTION
AL	ALUMINUM
ATS	AUTOMATIC TRANSFER SWITCH
C	CONDUIT WITH PULL-LINE ONLY
CEC	CALIFORNIA ELECTRICAL CODE
DB	DISTRIBUTION BOARD
DC	DIRECT CURRENT
DN	DOWN
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
FLA	FULL LOAD AMPS
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GRND	GROUND
HOA	HAND OFF AUTO
HZ	HERTZ
IBC	INTERNATIONAL BUILDING CODE
KW	KILOWATT
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPS
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MOCP	MAXIMUM OVER CURRENT PROTECTION
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NRTL	NATIONALLY RECOGNIZED TESTING LABORATORY
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
PH(ø)	PHASE
PNL	PANEL
S/N	SOLID NEUTRAL
SQFT	SQUARE FEET
SWBD	SWITCHBOARD
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SYSTEM
V	VOLT
VA	VOLT-AMP
VAV	VARIABLE AIR VOLUME
VD	VOLTAGE DROP
W	WATT
WP	WEATHER-PROOF (NEMA 3R)
XFMR	TRANSFORMER
XP	EXPLOSION PROOF

ELECTRICAL SYMBOL LEGEND

(THIS IS A MASTER LEGEND, NOT ALL SYMBOLS MAY APPEAR ON DRAWINGS.)

SYMBOL	DESCRIPTION
	SHEET NOTE
	REVISION NUMBER
—F—F—	FIBER OPTIC LIGHTING
—N—N—	NEON/COLD CATHODE LIGHTING
—O—O—	COVE/LOW VOLTAGE LIGHTING
—LED—	LED LIGHTING
—0-10V—	0-10V CONTROL CABLE
—DMX—DMX—	DMX CONTROL CABLE
	DECORATIVE LIGHT FIXTURE (OWNER FURNISHED AND CONTRACTOR INSTALLED)
	LIGHT FIXTURE
	LIGHT FIXTURE WITH (1) LAMP ON EMERGENCY
	LIGHT FIXTURE ON EMERGENCY CIRCUIT OR INTEGRAL BATTERY BACK-UP
A	LETTER INDICATES LIGHT FIXTURE TYPE AS INDICATED ON FIXTURE SCHEDULE
	LIGHT FIXTURE
	LIGHT FIXTURE
	LIGHT FIXTURE
	LIGHT FIXTURE
	DOWNLIGHT FIXTURE
	DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT OR INTEGRAL BATTERY BACK-UP
	EMERGENCY BATTERY LIGHTING UNIT WITH TWIN HEADS
	EMERGENCY BATTERY LIGHTING UNIT WITH TWIN HEADS AND EXIT SIGN
	STEP LIGHT
	WALL WASH/ACCENT LIGHT
	WALL MOUNTED FIXTURE
	POLE MOUNTED FIXTURE
	TRACK LIGHT WITH FIXTURE HEADS
	EXIT LIGHT WITH DIRECTIONAL ARROWS AS INDICATED CEILING MOUNTED
	EXIT LIGHT WITH DIRECTIONAL ARROWS AS INDICATED WALL MOUNTED
	DOUBLE FACE EXIT LIGHT WITH DIRECTIONAL ARROWS AS INDICATED CEILING MOUNTED (1)
S	SINGLE POLE SWITCH AT +44" UNLESS NOTED (1)
SS	DUAL SWITCH AT +44" UNLESS NOTED (1)
S_3	3-WAY POLE SWITCH AT +44" UNLESS NOTED (1)
S_4	4-WAY POLE SWITCH AT +44" UNLESS NOTED (1)
S_P	SWITCH WITH NEON PILOT LIGHT AT +44" UNLESS NOTED (1)
S_L	BACKLIT SWITCH AT +44" UNLESS NOTED (1)
S_D	DIMMER SWITCH - SOLID STATE TYPE AT +44" UNLESS NOTED (1)
S_{2P}	2 POLE SWITCH
S_K	SWITCH - KEY OPERATED
S_M	SWITCH WITH MOTION SENSOR
S_{2M}	DUAL SWITCH WITH MOTION SENSOR
M	CEILING MOUNTED MOTION SENSOR
D	DAYLIGHT OR MOTION SENSOR (INDOORS)
S_T	THERMAL OVERLOAD SWITCH
S_{TM}	SWITCH WITH DIGITAL TIMER
DM	DIMMING MODULE
SM	SWITCHING MODULE
	SINGLE RECEPTACLE AT +18" UNLESS NOTED (1)
	DUPLEX RECEPTACLE AT +18" UNLESS NOTED
	GFCI RECEPTACLE AT +18" UNLESS NOTED (1)
	DOUBLE DUPLEX RECEPTACLE AT +18" UNLESS NOTED
	ISOLATED GROUND TYPE (ORANGE) DUPLEX RECEPTACLE AT +18" UNLESS NOTED
	SPECIAL RECEPTACLE AT +18" UNLESS NOTED
	100 AMP PIN AND SLEEVE RECEPTACLE
	CLOCK RECEPTACLE AT +90" UNLESS NOTED
	FLUSH FLOOR DUPLEX RECEPTACLE
Q	FLUSH FLOOR DOUBLE DUPLEX RECEPTACLE
	CEILING MOUNTED DUPLEX RECEPTACLE
	1/2 SWITCHED (BOTTOM HALF) DUPLEX RECEPTACLE AT +18" UNLESS NOTED
	EMERGENCY TYPE (RED) DUPLEX RECEPTACLE AT +18" UNLESS NOTED
	DOUBLE DUPLEX (HALF NORMAL/HALF ISOLATED GRND) AT +18" UNLESS NOTED
AV	AV RECEPTACLE
B	RECEPTACLE FOR INSECT LIGHT TRAP INSTALL 2'-6" BELOW FINISHED CEILING (1)
C	RECEPTACLE INSTALLED ABOVE COUNTER (1)
D	JANUS DISPLAY BOARD RECEPTACLE
F	FOOD CART RECEPTACLE (1)
H	RECEPTACLE INSTALLED HORIZONTALLY (1)
T	TIMECLOCK RECEPTACLE

SYMBOL	DESCRIPTION
P	SINGLE RECEPTACLE WITH INTEGRAL LOW VOLTAGE TRANSFORMER AND (2) USB PORTS
P	DUPLEX RECEPTACLE WITH INTEGRAL LOW VOLTAGE TRANSFORMER AND (2) USB PORTS
P4	RECEPTACLE WITH INTEGRAL LOW VOLTAGE TRANSFORMER AND (4) USB PORTS
TV	TELEVISION RECEPTACLE
	CEILING MOUNTED SPECIAL RECEPTACLE
	FLUSH FLOOR SPECIAL RECEPTACLE
B	CODE BLUE
P	PATIENT NURSE CALL
E_T	PATIENT TOILET
	MULTI-OUTLET PLUGSTRIP
FB	FLOOR BOX
OP	OPERATIONS PANEL
WB	WALL BOX
J	JUNCTION BOX
FS	JUNCTION BOX AND SWITCH WITH CONNECTION TO FIRE/SMOKE DAMPER. COORDINATE REQUIREMENTS WITH FIRE ALARM SYSTEM AND MECHANICAL CONTROL DIAGRAMS
V	JUNCTION BOX AND SWITCH WITH CONNECTION TO VARIABLE AIR VOLUME BOX. COORDINATE REQUIREMENTS WITH MECHANICAL CONTROL DIAGRAMS
DH	DOOR HARDWARE CONNECTION
HO	DOOR HOLD OPEN
	NON-FUSED DISCONNECT SWITCH - 30A, 3P UNLESS NOTED OTHERWISE
	FUSED DISCONNECT SWITCH - 30A, 3P WITH 30A FUSES UNLESS NOTED OTHERWISE
	COMPANY SWITCH
	MAGNETIC MOTOR STARTER - FVNR, NEMA SIZE #1 (UNLESS NOTED OTHERWISE) WITH HOA, RED RUN PILOT LIGHT, CONTROL XFMR, SOLID STATE OVERLOADS, (2) NO AND (2) NC CONTACTS
	COMBINATION FUSED SWITCH AND STARTER AS NOTED ABOVE
	COMBINATION NON-FUSED SWITCH AND STARTER AS NOTED ABOVE
R	RELAY
C	CONTACTOR
P	POWER SUPPLY
TS	TIMESWITCH
PC	PHOTOCELL (INSTALL ON ROOF FACING NORTH)
T	THERMOSTAT OUTLET AT +44" UNLESS NOTED
	PUSHBUTTON TYPE CONTROL STATION
B	DOORBELL - CEILING MOUNTED
CB	CIRCUIT BREAKER
F 22	FOOD SERVICE EQUIPMENT-SEE FOOD SERVICE PLANS
	SURFACE MOUNTED PANELBOARD
	FLUSH MOUNTED PANELBOARD
	MAIN SWITCHBOARD, MOTOR CONTROL CENTER OR DISTRIBUTION BOARD
	CONCRETE PULLBOX WITH HEAVY DUTY STEEL TRAFFIC COVER
T	TRANSFORMER
	MOTOR OUTLET
	HOMERUN CONDUIT - STROKES INDICATE QUANTITY OF CONDUCTORS
	CONDUIT AND/OR WIRE CONCEALED IN WALL OR ABOVE CEILING EXCEPT IN EXPOSED STRUCTURE AREAS
	CONDUIT AND/OR WIRE BELOW FLOOR OR GRADE
	EXISTING CONDUIT AND/OR WIRE TO BE REMOVED
	EXISTING CONDUIT AND/OR WIRE TO REMAIN (SHOWN LIGHT LINEWEIGHT)
	CONDUIT STUB-OUT
	CONDUIT AND/OR WIRE RISER UP/RISER DOWN
	CIRCUITING - STROKE WITH DOT INDICATES ISOLATED GROUND CONDUCTOR
	1/2"-2 #12 & 1 #12 GRND THWN UNLESS NOTED
	1/2"-3 #12 & 1 #12 GRND THWN UNLESS NOTED
	1/2"-4 #12 & 1 #12 GRND THWN UNLESS NOTED
	1/2"-5 #12 & 1 #12 GRND THWN UNLESS NOTED
	3/4"-6 #10 & 1 #10 GRND THWN UNLESS NOTED
	3/4"-7 #10 & 1 #10 GRND THWN UNLESS NOTED
	3/4"-8 #10 & 1 #10 GRND THWN UNLESS NOTED
	PRIMARY MEDIUM VOLTAGE SWITCH WITH UNIT SUBSTATION
	PRIMARY MEDIUM VOLTAGE SWITCH EXTERIOR PAD MOUNT
	CIRCUIT BREAKER
	SHUNT TRIP CIRCUIT BREAKER
	DRAW-OUT CIRCUIT BREAKER - MEDIUM VOLTAGE
	DRAW-OUT CIRCUIT BREAKER - 600 VOLT

SYMBOL	DESCRIPTION
	FUSIBLE SWITCH
C	BOLTED PRESSURE SWITCH WITH GROUND FAULT PROTECTION
K	KIRK-KEY SWITCH
	GENERATOR
	GROUNDING ELECTRODE
M	SINGLE METER WITH CT
	AUTOMATIC TRANSFER SWITCH
	SHUNT TRIP DEVICE LOCATED IN METAL ENCLOSURE WITH HINGED AND LOCKABLE COVER
	FEEDER - SIZE AS INDICATED ON FEEDER SCHEDULE
	MECHANICAL EQUIPMENT - SEE HVAC AND PLUMBING DRAWINGS
	CAPACITOR
	METER
SPD	SURGE PROTECTION DEVICE
CONT	ELEVATOR/ESCALATOR CONTROLLER
	GROUND BUS AND GROUND ELECTRODES
	GROUND GRID
	FUSIBLE MEDIUM VOLTAGE SWITCH
	MEDIUM VOLTAGE MODULAR CONNECTORS

PLAN/RISER — SHEET

PLAN — SHEET

MECHANICAL EQUIPMENT TYPE
MECHANICAL EQUIPMENT NUMBER
E = EXISTING

NOTES

(1) RECEPTACLE HEIGHTS SHALL COMPLY WITH ANSI 117.1 REQUIREMENTS.

SHEET INDEX

ISSUE	SHEET NUMBER	SHEET DESCRIPTION
2018-08-17 CITY SUBMITTAL	E0.00	COVER SHEET
•	E0.01	SPECIFICATIONS
•	E2.02	2ND FLOOR ELECTRICAL PLAN
•	E2.01	POWER PLAN
•	E5.00	SINGLE LINE DIAGRAM

REGISTERED PROFESSIONAL ENGINEER
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E16143
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Corrections

PLN CHK 08-17-18

CITY OF LA MESA, CALIFORNIA
DEPT. OF PUBLIC WORKS
ENGINEERING DIVISION

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL				

UTILITIES BY: JH
TRAFFIC BY: A. Cook
RECORD DRAWING BY: A. Reyburn
PUBLIC WORKS: RA
CONTROL CERTIFICATION
CURRENT COORDINATES
PROP. PT.

Sheet Title: COVER SHEET

Project Title: City of La Mesa Police Facility
For Construction

Project Architect: Mike Smith

Drawn By: ES/GM/SC

Project Number: 200509.00

Date: 08-17-18

Sheet Number: E0.00

9282.05

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#18.0405-01

DIVISION 26 - ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL

A. GENERAL

1. GENERAL CONDITIONS, SPECIAL REQUIREMENTS OR GENERAL REQUIREMENTS OF THE PROJECT SPECIFICATIONS MANUAL ARE MADE PART OF THIS SPECIFICATION AND HAVE THE SAME FORCE AND EFFECT AS IF COMPLETELY REPRODUCED.

2. DEFINITIONS: THE WORD "WORK" SHALL MEAN LABOR AND ANY INCIDENTAL ITEMS OR SERVICES NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE COMPLETE SYSTEMS NOTED ON THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS. THE WORD "PROVIDE" SHALL MEAN FURNISH AND INSTALL AND MAKE FINAL CONNECTIONS AND LEAVE IN AN APPROVED COMPLETE OPERATING CONDITION.

3. WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE LATEST ADOPTED EDITIONS OF THE APPLICABLE CBC (CALIFORNIA BUILDING CODE), CECRS (CALIFORNIA ENERGY COMMISSION REGULATIONS AND STANDARDS), CEC (CALIFORNIA ELECTRICAL CODE), ADA (AMERICANS WITH DISABILITIES ACT), AND OTHER APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS; INCLUDING AMENDMENTS.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING FEES AND OBTAINING PERMITS AND INSPECTIONS REQUIRED FOR THE WORK.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FITTING OF MATERIAL INTO THE BUILDING AS INDICATED ON DRAWINGS, WITHOUT INTERFERENCE WITH OTHER WORK, AND SHALL MAKE REASONABLE MODIFICATIONS IN THE LAYOUTS NEEDED TO PREVENT CONFLICT WITH OTHER TRADES, TO PROVIDE ACCESS AND FOR THE PROPER EXECUTION OF THE WORK.

6. WORK SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES INCLUDING CONTRACT DOCUMENTS, SHOP DRAWINGS, AND EXISTING SYSTEMS.

7. DO NOT SCALE DRAWINGS AS THEY ARE DIAGRAMMATIC AND SCHEMATIC IN NATURE. CONTRACTOR SHALL PROVIDE NECESSARY ITEMS TO COMPLETE THE WORK ACCORDING TO INDUSTRY STANDARDS. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS TO CALL OUT FOR FINISHED WORK, TESTED AND READY FOR OPERATIONS. ARRANGEMENT OF EQUIPMENT AND ROUTING OF RACEWAYS INDICATED ON DRAWINGS SHALL BE ROUTED PLUMB AND AT RIGHT ANGLES. INSTALLATION OF SYSTEMS MAY REQUIRE MODIFICATION DUE TO UNFORESEEN CONDITIONS.

8. VERIFY ALL SIZES, DIMENSIONS, AND CONDITIONS BEFORE STARTING ANY WORK. ANY DEVIATIONS OR PROBLEMS SHALL BE TRANSMITTED TO THE ARCHITECT FOR REVIEW.

9. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY.

10. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT.

11. GUARANTEE THE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY OCCUR UNDER NORMAL USAGE FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE. DEFECTS SHALL BE PROMPTLY REMEDIED WITHOUT COST TO THE OWNER.

12. SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO OWNER.

13. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING PROVIDED UNDER THIS SECTION OR FACTORY WIRING IN EQUIPMENT PROVIDED UNDER THIS SECTION.

14. SYSTEMS SHALL BE COMPLETE, OPERABLE AND READY FOR CONTINUOUS OPERATIONS. LIGHTS, SWITCHES, RECEPTACLES, MOTORS, ETC SHALL BE CONNECTED AND OPERABLE.

15. ALL ELECTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY UNDERWRITERS LABORATORY (UL) OR OTHER NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL).

B. EXISTING CONDITIONS

1. THIS PROJECT INVOLVES CONSTRUCTION INSIDE AN EXISTING STRUCTURE. CONTRACTORS, BY SUBMITTING A BID ARE DEEMED TO BE COMPLETELY FAMILIAR WITH THE EXISTING CONDITIONS OF THE BUILDING AS IT INFLUENCES THE WORK DESCRIBED. NO CLAIMS FOR EXTRA COMPENSATION WILL BE CONSIDERED FOR EXISTING CONDITIONS VISIBLE OR REASONABLY INFERABLE FROM A CAREFUL EXAMINATION OF THE EXISTING BUILDING CONDITIONS.

2. CONTRACTOR SHALL INSPECT THE EXISTING FIELD CONDITIONS AT THE SITE AND THE CONTRACT DOCUMENTS PRIOR TO THE START OF ANY WORK TO DETERMINE WHAT EFFECT THE EXISTING CONDITIONS WILL HAVE ON THE WORK. CONTRACTOR SHALL REPORT DISCREPANCIES TO THE ARCHITECT AND INCLUDE IN HIS BID ALL COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.

3. CONTRACTOR SHALL CONNECT THEIR WORK TO VARIOUS EXISTING ELECTRICAL SYSTEMS. THE NEW WORK SHALL BE COMPATIBLE WITH THE EXISTING SYSTEM CONDITIONS.

4. CARE SHALL BE TAKEN DURING INSTALLATION OF THE NEW WORK, AS NOT TO DAMAGE OR INTERRUPT THE EXISTING BUILDING SYSTEMS AND SERVICES INSTALLED. DAMAGE TO EXISTING SYSTEMS AND EQUIPMENT CAUSED BY CONTRACTOR DURING THE INSTALLATION OF THEIR WORK SHALL BE REPAIRED AND/OR REPLACED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE BUILDING OWNER.

5. SHUTDOWN OF EXISTING SYSTEMS FOR CONNECTION TO EXISTING SERVICES SHALL BE COORDINATED WITH THE OWNER. CONTRACTOR SHALL SUBMIT REQUESTS WHERE THEY AFFECT THE OPERATION OF THE BUILDING SYSTEMS AT LEAST ONE (1) WEEK IN ADVANCE OF ANY REQUIRED SHUTDOWN. THE ACTUAL SHUTDOWN PERIOD SHALL BE AS SHORT AS POSSIBLE AND AT A TIME AGREED TO BY THE OWNER.

6. DEMOLITION SHALL BE COORDINATED WITH OWNER, ARCHITECT AND CONTRACTOR.

7. REPORT ANY EQUIPMENT DISCREPANCIES FOUND TO THE ARCHITECT WITHIN FIVE (5) DAYS OF DISCOVERY.

8. REPORT DISCREPANCIES TO THE ARCHITECT AND INCLUDE IN THE BID ALL COSTS REQUIRED TO MAKE NEW WORK MEET EXISTING CONDITIONS.

9. PROVIDE ELECTRICAL DEMOLITION REQUIRED. REFER TO ARCHITECTURAL DEMOLITION DRAWINGS FOR LOCATION AND EXTENT OF DEMOLITION REQUIRED. CONTRACTOR SHALL VISIT SITE PRIOR TO BID TO DETERMINE EXTENT OF WORK INVOLVED. PROVIDE LABOR AND MATERIALS AS REQUIRED TO MAINTAIN AND/OR RESTORE CONTINUITY OF SERVICE TO EXISTING CIRCUITS.

10. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY EXISTING EQUIPMENT OR CIRCUITS THAT ARE REMAINING TO BE RECONNECTED TO NEW OR EXISTING SWITCHBOARDS/ PANELBOARDS. PROVIDE SWITCHES, RECEPTACLES, CONDUIT, WIRE, ETC AS REQUIRED TO RESTORE CONTINUITY OF CIRCUIT(S).

11. CONTRACTOR SHALL PROVIDE NECESSARY DEMOLITION TO REMOVE EXISTING UNUSED CONDUIT, WIRE, CABLE, JUNCTION BOXES, RECEPTACLES, SWITCHES, LIGHTS, FIRE ALARM DEVICES, ETC COMPLETE WITH ASSOCIATED CIRCUIT TO SOURCE.

12. IMMEDIATELY AFTER AWARD OF CONTRACT, CONTRACTOR SHALL VERIFY AVAILABLE PHYSICAL SPACE AND AMPACITY OF EXISTING PANELBOARDS, SWITCHBOARDS, DISTRIBUTION BOARDS, MOTOR CONTROL CENTERS, ETC AND PROVIDE WRITTEN DOCUMENTATION OF FINDINGS TO THE ENGINEER.

C. SUBMITTALS

1. SUBMIT SHOP DRAWINGS AND TECHNICAL DATA SHEETS FOR EQUIPMENT AND MATERIALS SPECIFIED IN ELECTRONIC PDF FORMAT. SHOP DRAWINGS AND TECHNICAL DATA SHEETS WILL BE REVIEWED BY THE ENGINEER FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND ISSUE A WRITTEN ASSESSMENT PRIOR TO COMMENCEMENT OF WORK. SUBMITTALS SHALL INCLUDE BUT NOT BE LIMITED TO: LIGHTING FIXTURES, SWITCHGEAR, PANELBOARDS, WIRING DEVICES, SAFETY SWITCHES, FUSES, MOTOR STARTERS, LAMPS, CONDUIT, CONDUIT FITTINGS AND TRANSFORMERS.

D. DRAWINGS

1. MAINTAIN TWO (2) SETS OF WHITE PRINTS OF DRAWINGS PERTAINING TO THE WORK. ONE (1) SET OF PRINTS SHALL BE KEPT ON SITE AND CHANGES OR DEVIATIONS FROM THE CONTRACT DRAWINGS SHALL BE CAREFULLY NOTED AS CHANGES OR DEVIATIONS ARE MADE. AT THE COMPLETION OF THE PROJECT AND BEFORE FINAL ACCEPTANCE OF THE WORK, COPY THE CHANGES, DEVIATIONS, AND COMPLEMENTARY INFORMATION ON THE OTHER SET OF PRINTS AND RETURN IT TO THE OWNER. THE COST OF PRINTS AND COST INVOLVED IN THE PREPARATION OF THESE RECORD DRAWINGS SHALL BE BORNE BY THE CONTRACTOR.

PART 2 - PRODUCTS

A. GENERAL

1. PROVIDE EQUIPMENT AS SPECIFIED AND/OR SCHEDULED AND IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS. EQUIPMENT SHALL OPERATE ACCORDING TO THE MANUFACTURER'S "OWNER'S OPERATING AND MAINTENANCE MANUAL" TROUBLE-FREE.

B. WIRE AND CABLE

1. WIRE SHALL BE COPPER, 75°C RATED FOR GENERAL USE. FOR FIXTURE AND EQUIPMENT CONNECTIONS PROVIDE WIRING WITH TEMPERATURE RATING PER MANUFACTURER'S REQUIREMENTS. SIZES INDICATED ARE FOR INSTALLATION IN A MAXIMUM 30°C AMBIENT. CONDUCTOR AMPACITY SHALL BE DE-RATED FOR HIGHER AMBIENT INSTALLATIONS.

C. RACEWAYS AND FITTINGS

1. ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC RACEWAYS. EMT FITTINGS SHALL BE STEEL. CONNECTORS SHALL BE INSULATED THROAT TYPE.

2. ALL CONDUITS AND RACEWAYS SHALL HAVE A CODE SIZED COPPER GROUNDING CONDUCTOR. INCREASE CONDUIT SIZE AS REQUIRED.

D. DISTRIBUTION EQUIPMENT

1. DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE. FUSIBLE SWITCHES SHALL ACCEPT CLASS 'R' FUSES ONLY AND REJECT OTHERS. INSTALL DISCONNECT SWITCH BOLTED TO HVAC UNIT FRAME WHERE POSSIBLE (COORDINATE LOCATION WITH HVAC MANUFACTURER TO AVOID WARRANTY INFRACTIONS). SILICONE SEAL ALL HOLES IN UNIT.

E. WIRING DEVICES

1. WIRING DEVICES SHALL BE SPECIFICATION GRADE AND RATED AT 20 AMPERES. THE DEVICE PLATES SHALL BE STAINLESS STEEL. THE COLOR OF THE DEVICES AND COVER PLATES SHALL BE AS DIRECTED BY ARCHITECT. EXTERIOR RECEPTACLES SHALL BE TYPE WR, GFCI.

2. GROUND FAULT CIRCUIT INTERRUPTERS SHALL BE READILY ACCESSIBLE. WHERE RECEPTACLES ARE NOT READILY ACCESSIBLE, PROVIDE GFCI CIRCUIT BREAKERS AND IDENTIFY THE RECEPTACLES AS GFCI PROTECTED.

F. BOXES

1. PULLBOXES, CABINETS, ETC MOUNTED ON THE EXTERIOR AT GRADE LEVEL, SHALL BE WEATHERPROOF TYPE WITH HINGED LOCKABLE COVERS SECURED WITH TAMPER-PROOF SCREWS.

2. BOXES SHALL BE MINIMUM 4" SQUARE WITH REQUIRED EXTENSIONS AND PLASTER OR TILE RINGS.

H. FIRE ALARM

1. FIRE ALARM SYSTEM. CONTRACTOR SHALL PROVIDE DEVICES, CONDUIT, WIRES, CABLE, PROGRAMMING AND TESTING AS DIRECTED BY EQUIPMENT MANUFACTURER AND FIRE DEPARTMENT FOR A CODE COMPLIANT FIRE ALARM SYSTEM. MATERIALS, EQUIPMENT AND WORKMANSHIP SHALL BE COMPLETE AND OPERABLE IN EVERY RESPECT. SUBMIT SINGLE LINE OF SYSTEM WITH SHOP DRAWINGS. THIS SINGLE LINE DIAGRAM SHALL SHOW DEVICES, CONDUIT, WIRE AND CABLE SIZES, EQUIPMENT TO BE USED AND SHALL BE STAMPED AND SIGNED BY LOCAL FIRE DEPARTMENT. SYSTEM CALIBRATION AND TESTING SHALL BE BY FACTORY CERTIFIED TECHNICIAN. SUBMIT TO ENGINEER PRIOR TO SUBMITTAL TO FIRE DEPARTMENT.

2. DUCT DETECTORS SHALL BE PHOTOELECTRIC TYPE FURNISHED BY CONTRACTOR, INSTALLED IN THE SUPPLY AIR DUCTS BY MECHANICAL CONTRACTOR AND CONNECTED TO THE FIRE ALARM SYSTEM BY CONTRACTOR. DUCT DETECTOR SHALL BE CONNECTED TO SHUT OFF AIR HANDLING UNITS LOCATED WITHIN THE SAME PLENUM. DUCT DETECTORS SHALL NOT BE MOUNTED IN AN ENVIRONMENT WHICH EXCEEDS 122°F. PROVIDE ZERO VELOCITY TYPE DETECTORS WHERE REQUIRED, INSTALLATION SHALL BE COORDINATED WITH MECHANICAL CONTRACTOR TO MAINTAIN AIRFLOW AND ACCESS.

PART 3 - EXECUTION

A. GENERAL

8. FINAL CONNECTIONS AND ROUGH-IN REQUIREMENTS TO EQUIPMENT SHALL BE PER MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED INCLUDING ALL RACEWAYS, BOXES, WIRING, WIRING DEVICES, ETC.

9. VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.

10. PROVIDE MAINTENANCE RECEPTACLE WITHIN 25'-0" OF ALL MECHANICAL OR MOTORIZED EQUIPMENT.

11. SEE MECHANICAL DRAWINGS FOR LOCATION OF MECHANICAL EQUIPMENT. PROVIDE SERVICE TO AND CONNECT EQUIPMENT AS REQUIRED. PROVIDE FUSES OR HACR-TYPE CIRCUIT BREAKERS FOR AIR CONDITIONING EQUIPMENT SIZED IN ACCORDANCE WITH MANUFACTURER'S NAMEPLATE.

12. PANEL DIRECTORIES SHALL BE REMOVABLE. ROOM NAMES AND NUMBERS SHALL BE AS DIRECTED BY OWNER. DIRECTORIES SHALL BE TYPED AND INSTALLED UNDER CLEAR PLASTIC COVERS.

13. CONTRACTOR SHALL PROVIDE NEW UPDATED PANELBOARD DIRECTORIES FOR EXISTING AND NEW CIRCUITS BEING UTILIZED FOR COMPLETION OF PROJECT.

14. CONDUITS PENETRATING THROUGH ROOF SHALL HAVE ROOF FLASHING WITH CAULK TYPE COUNTER FLASHING SLEEVE. INSTALLATION SHALL BE WATERTIGHT.

15. FINAL CONNECTIONS TO MOTORS, TRANSFORMERS AND OTHER VIBRATING EQUIPMENT SHALL BE WITH SEAL-TITE FLEX (3'-0" MAXIMUM LENGTH) AND APPROVED FITTINGS. DO NOT SECURE CONDUITS OR DEVICES TO DUCTWORK OR MECHANICAL EQUIPMENT.

16. RECEPTACLES INSTALLED OUTSIDE, ON THE BUILDING EXTERIOR OR ROOF, IN KITCHENS OR WITHIN 6'-0" HORIZONTALLY FROM A SINK OR DRINKING FOUNTAIN UNLESS LOCATED BELOW A COUNTER OR OTHERWISE PROTECTED SHALL BE GFCI TYPE OR PROTECTED BY GFI CIRCUIT BREAKER.

B. SEISMIC ANCHORAGE

EQUIPMENT ANCHORAGE DETAILING:

1. SHOW THE FOLLOWING NOTE PROMINENTLY ON THESE DRAWINGS:

   1.A. ANCHORAGE AND SUPPORTS OF ALL EQUIPMENT TO BE INSTALLED, AS A PART OF THIS PROJECT SHALL BE DETAILED ON CONSTRUCTION DOCUMENTS, EXCEPT THOSE EXEMPT BY 2010 CBC SECTION 1615A.1.12.

   1.B. EQUIPMENT SUPPORTS AND ANCHORAGE SHALL BE APPROVED BY THE APPROPRIATE DESIGN PROFESSIONAL OF RECORD AND OSHPD AS A PART OF FIELD REVIEWS/OBSERVATIONS. THE INSPECTOR OF RECORD (IOR) SHALL ASSURE THAT THE ABOVE REQUIREMENTS ARE ENFORCED.

2. REFERENCE: 2010 CBC SECTIONS 107 AND 1615A.

ELECTRICAL:

1. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRE-STRESSED CONCRETE (PRE- OR POST-TENSIONED) LOCATE THE PRE-STRESSED TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.

EQUIPMENT ANCHORAGE NOTE:

1. ALL ELECTRICAL EQUIPMENT SHALL BE ANCHORED OR BRACED TO MEET THE HORIZONTAL AND VERTICAL FORCES PRESCRIBED IN THE 2010 CBC SECTIONS 1615A.1.20, 1615A.1.21 AND 1615A.1.22 AND ASCE 7-05 SECTIONS 13.3, 13.4, 13.6 AND CHAPTER 6.

2. THE ATTACHMENT OF THE FOLLOWING ITEMS SHALL BE DESIGNED TO RESIST THE FORCES PRESCRIBED ABOVE, BUT NEED NOT BE DETAILED ON THE PLANS, AND THE PROJECT INSPECTOR WILL VERIFY THAT THESE ITEMS (EQUIPMENT) HAVE BEEN ANCHORED:

   2.A. EQUIPMENT WEIGHING LESS THAN 400 POUNDS SUPPORTED DIRECTLY ON THE FLOOR OR ROOF.

   2.B. FURNITURE REQUIRED TO BE ATTACHED IN ACCORDANCE WITH ASCE 7-05, SECTION 13.5.

   2.C. TEMPORARY AND MOVABLE EQUIPMENT WITH FLEXIBLE CONNECTION TO POWER OR UTILITIES.

   2.D. EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUPPORTED BY VIBRATION ISOLATORS.

   2.E. EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

3. FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAIL ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE MECHANICAL/ELECTRICAL ENGINEER.

DISTRIBUTION SYSTEM BRACING NOTE:

1. ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO RESIST THE FORCES PRESCRIBED IN ASCE 7-05 SECTION 13.3 AS DEFINED IN ASCE 7-05 SECTION 13.6.8, 13.6.7, 13.6.5.5 ITEM 6 AND 2010 CBC SECTIONS 1615A.1.20, 1615A.1.21 AND 1615A.1.22.

2. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

9282.06

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Drawing Name: 18-0405-01 Title 24 Notes
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Corrections
PLN CHK 08-17-18

CITY OF LA MESA, CALIFORNIA
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

CITY ENGINEER	RCE 16143	DATE	UTILITIES BY: JH
			TRAFFIC BY:
			PUBLIC WORKS BY:

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL				

CONTROL CERTIFICATION
TOBERT FOORDINATES
PROP #:

Sheet Title: SPECIFICATIONS

Project Title: City of La Mesa Police Facility For Construction

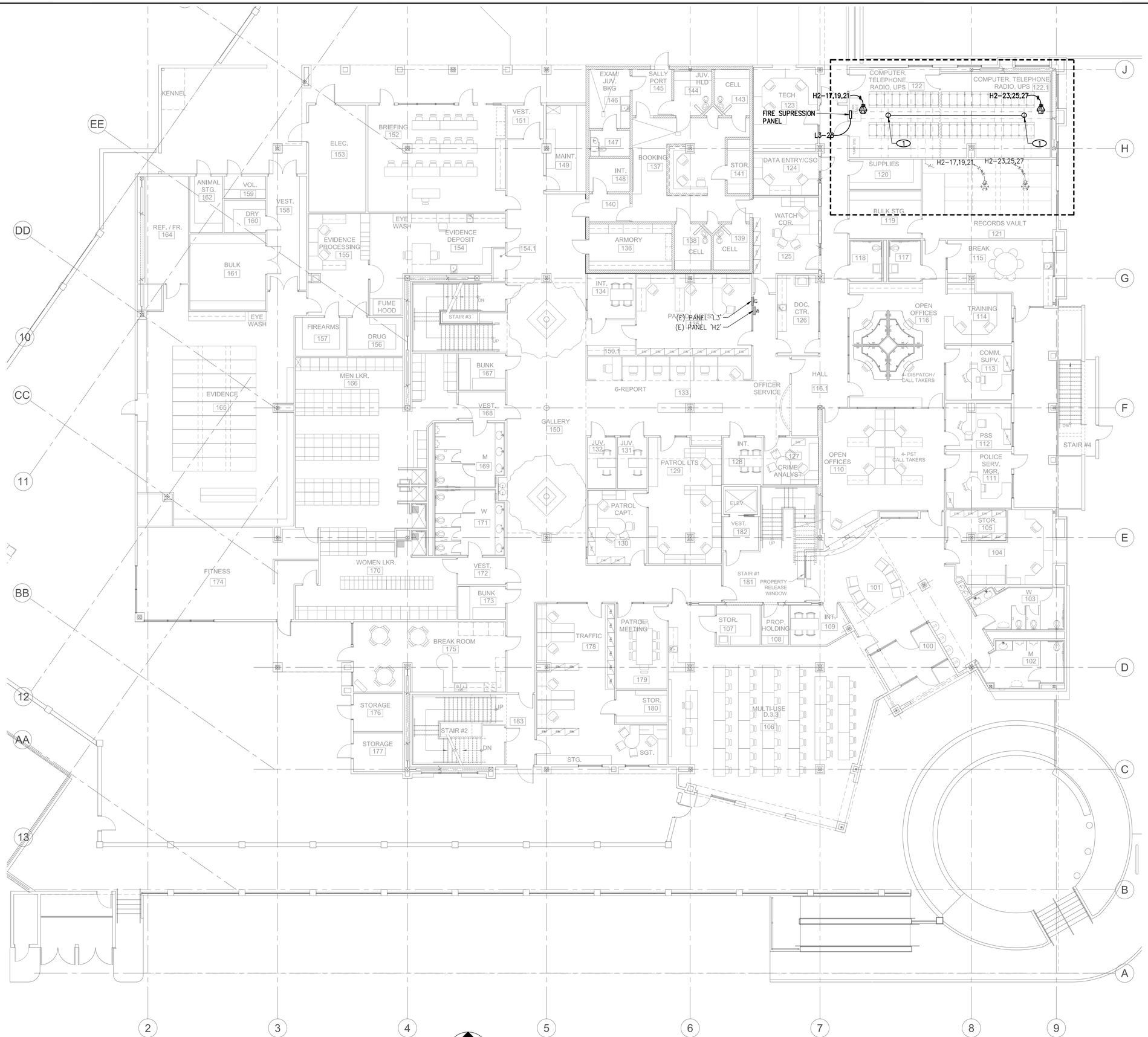
Project Architect Mike Smith

Drawn By ES/GM/SC

Project Number 200509.00

Date: 08-17-18

Sheet Number E0.01



1 POWER PLAN
E2.01 SCALE: 1/8" = 1'-0"

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

N

NOTICE

1. EXISTING ELECTRICAL DEVICES SHOWN LIGHT, NEW SHOWN BOLD, DEMO SHOWN LIGHT CROSSED.

NOTES

1. MOTORIZED DAMPER. REFER TO MECHANICAL FOR ADDITIONAL INFORMATION

9282.07

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Corrections

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CITY OF LA MESA, CALIFORNIA
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
APPROVED FOR CONSTRUCTION
DATE: 03/16/2020
DTT: 03/16/2020 PWC: 60164

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL				

UTILITIES BY: N/A
TRAFFIC BY: N/A
PUBLIC WORKS: N/A
CONTROL CERTIFICATION
VOIDED FOODGROVES
PROP. PT:

Sheet Title
POWER PLAN

Project Title
City of La Mesa
Police Facility
For Construction

Project Architect
Mike Smith

Drawn By
ES/GM/SC

Project Number
200509.00

Date: 08-17-18

Sheet Number
E2.01

1 E2.02 2ND FLOOR ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

N

NOTICE

1. EXISTING ELECTRICAL DEVICES SHOWN LIGHT, NEW SHOWN BOLD, DEMO SHOWN LIGHT CROSSED.
2. INTERLOCK INDOOR UNITS WITH OUTDOOR UNITS PER MANUFACTURER'S WIRING DIAGRAM

NOTES

1. 1"C-3 #8 & 1 #10 GRND.
2. CONNECT TO EXISTING RECEPTACLE CIRCUIT
3. INTERLOCK WITH INDOOR UNIT. CONDUIT AND WIRE PER MANUFACTURES WIRING DIAGRAM

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Corrections
PLN CHK 08-17-18

CITY OF LA MESA, CALIFORNIA
PUBLIC WORKS ENGINEERING DIVISION
APPROVED FOR CONSTRUCTION
CITY ENGINEER R.C.E. 60344 DATE
DESCRIPTION BY APPROVED DATE FILMED
ORIGINAL
UTILITIES BY: JH
TRAFFIC BY: F. Cuevas
PUBLIC WORKS: RB
CONTROL CERTIFICATION
VOSBERT FOORDINATES
PROP. BY:

Sheet Title
2ND FLOOR ELECTRICAL PLAN

Project Title
City of La Mesa Police Facility
For Construction

Project Architect
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Drawn By
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Project Number
200509.00

Date: 08-17-18

Sheet Number
E2.02

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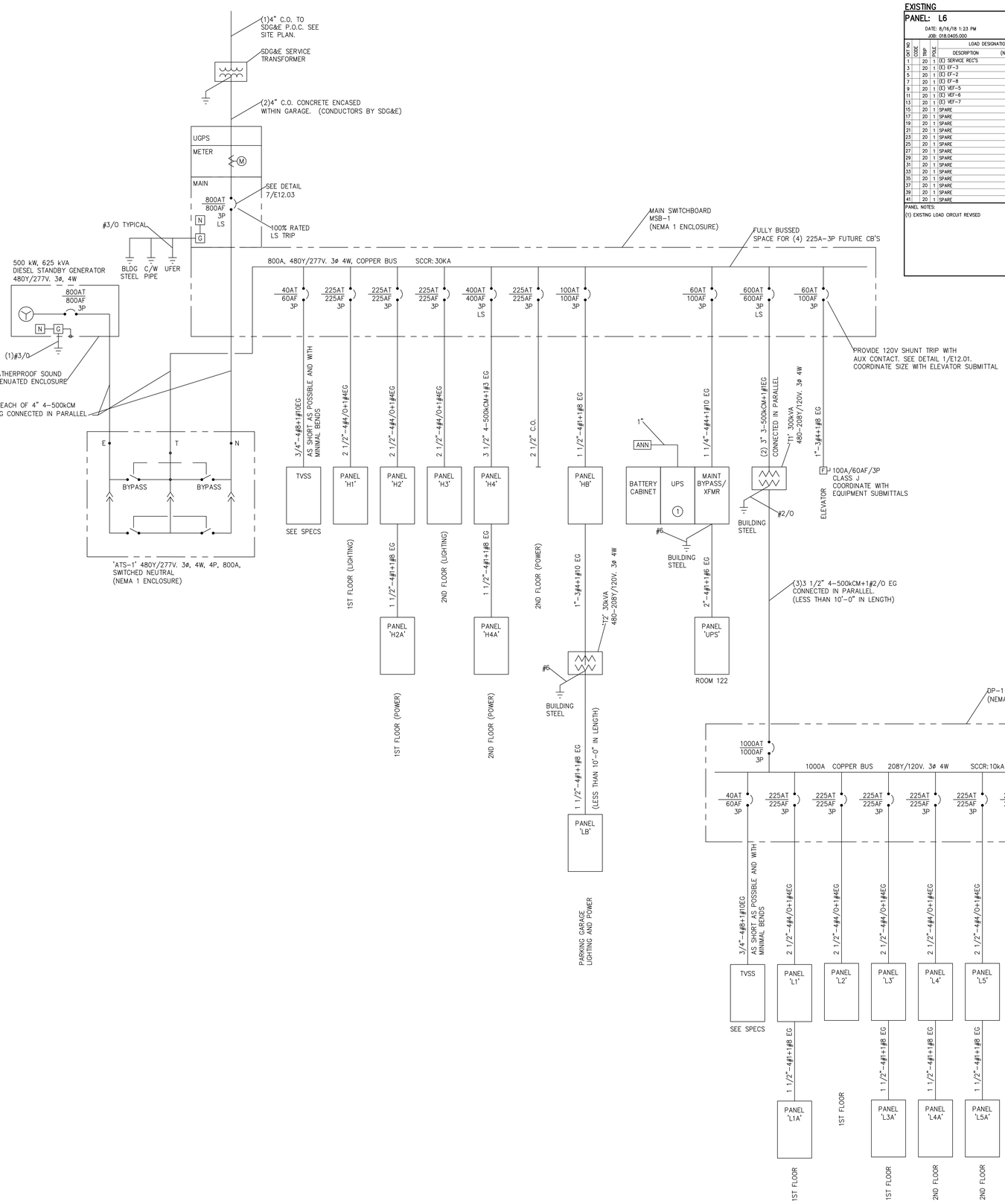

SINGLE LINE DIAGRAM

1 / E5.00

EXISTING PANEL: L6

VOLTAGE: 208 / 120 3ø 4W CIRCUIT CODE: blank or
BUS: 225A
DATE: 8/16/18 1:23 PM MAINS: L.O. LOCATION:
JOB: 018.0405.000 AIC RATING: 10,000 MOUNTING: SURFACE
NO. OF EQUIPMENT: 0
N: NON-CONTINUOUS
L: LONG-CONTINUOUS
R: DEMANDABLE RECEPTACLES
K: KITCHEN

CKT NO	CODE	TRIP	POLE	LOAD DESIGNATION (NOTE)	M	R	L	CONNECTED ØA	ØB	ØC	A	B	C	ØA	ØB	ØC	L	R	M	LOAD DESIGNATION (NOTE)	TRIP	POLE	CODE	CKT NO
1		20	1	(E) SERVICE REC'S				360			•			1080					6	(1) ROOF REC'S	20	1		2
3		20	1	(E) EF-3					432		•				696					(E) VEF-8	20	1		4
5		20	1	(E) EF-2						432		•				696				(E) VEF-9	20	1		6
7		20	1	(E) EF-8				432			•			696						(E) VEF-10	20	1		8
9		20	1	(E) VEF-5					696		•				696					(E) VEF-11	20	1		10
11		20	1	(E) VEF-6						696		•				696				(E) VEF-12	20	1		12
13		20	1	(E) VEF-7				696			•			696						(E) VEF-18	20	1		14
15		20	1	SPARE					–		•				–					SPARE	20	1		16
17		20	1	SPARE						–	•					–				SPARE	20	1		18
19		20	1	SPARE				–			•			–						SPARE	20	1		20
21		20	1	SPARE					–		•				–					SPARE	20	1		22
23		20	1	SPARE						–	•					–				SPARE	20	1		24
25		20	1	SPARE				–			•			–						SPARE	20	1		26
27		20	1	SPARE					–		•				–					SPARE	20	1		28
29		15	1	SPARE						–	•					–				SPARE	20	1		30
31			3	–																–	15	1		32
33			3	–																–	15	1		34
35		15	1	SPARE					–		•				–					SPARE	15	1		36
37		15	1	SPARE				–			•			21193						SPARE	100	1	N	38
39		15	1	SPARE					–		•				21359					–			N	40
41		15	1	SPARE						–	•					14018				–			N	42

PANEL NOTES: PHASE TOTALS: ØA: 3960 ØB: 2520 ØC: 2520

(1) EXISTING LOAD CIRCUIT REVISED

TOTAL CONNECTED VA	9000
CONNECTED VA (CODE N)	9000
CONNECTED VA (CODE L)	0
CONNECTED VA (CODE R)	0
CONNECTED VA (CODE K)	0
PANEL CONNECTED KVA	9.0
PANEL DEMAND KVA	9.0
PANEL DEMAND AMPS	25.0
HIGH Ø AMPS w/ DEMAND	33.0

EXISTING PANEL: H2

VOLTAGE: 480 / 277 3ø 4W CIRCUIT CODE: blank or
BUS: 225A
DATE: 8/16/18 10:53 AM MAINS: L.O. LOCATION:
JOB: 018.0405.000 AIC RATING: 14,000 MOUNTING: FLUSH
NO. OF EQUIPMENT: 0
N: NON-CONTINUOUS
L: LONG-CONTINUOUS
R: DEMANDABLE RECEPTACLES
K: KITCHEN

CKT NO	CODE	TRIP	POLE	LOAD DESIGNATION (NOTE)	M	R	L	CONNECTED ØA	ØB	ØC	A	B	C	ØA	ØB	ØC	L	R	M	LOAD DESIGNATION (NOTE)	TRIP	POLE	CODE	CKT NO
1	N	15	1	(E) HP1-1				1856			•			2410						(E) HP1-12	15	1	N	2
3	N	15	1	(E) HP1-2					2410		•				–					SPARE	15	1		4
5	N	15	1	(E) HP1-3						1856	•					2410				(E) HP1-14	15	1	N	6
7	N	25	1	(E) HP1-4				4210			•			5485						(E) HP1-16	30	1	N	8
9	N	25	1	(E) HP1-5					4210		•				4210					(E) HP1-17	25	1	N	10
11	N	15	1	(E) HP1-6						997	•					2604				(E) HP1-18	15	1	N	12
13	N	30	1	(E) HP1-7				5485			•			2604						–			N	14
15	N	15	1	(E) HP1-8					1690		•				2604					–			3	N	16
17	L	20	1	FC-1-9	(1)	1				2882	•					1690				(E) HP1-19			15	1	N	18
19	L			–				2882			•			2410						(E) HP1-20			15	1	N	20
21	L		3	–					2882		•				1690					(E) HP1-21			15	1	N	22
23	N	20	1	FC-1-10	(1)	1				2882	•					–				SPARE			15	1		24
25	N			–				2882			•			–						SPARE			15			26
27	N		3	–					2882		•				–					–						28
29		15	1	SPARE						–	•					–				–			3			30
31				–				–			•			–						SPARE			15	1		32
33			3	–					–		•				–					SPARE			15	1		34
35		15	1	SPARE						–	•					–				SPARE			15	1		36
37		15	1	SPARE				–			•			21193						(E) PANEL 'H2A'			100	1	N	38
39		15	1	SPARE					–		•				21359					–					N	40
41		15	1	SPARE						–	•					14018				–			3		N	42

PANEL NOTES: PHASE TOTALS: ØA: 51417 ØB: 43937 ØC: 29339

(1) REMOVE EXISTING BREAKER MADE SPARE THROUGH DEMOLITION. PROVIDE NEW BREAKER, MATCH MANUFACTURER, RATING, ETC TO EXISTING PANEL

TOTAL CONNECTED VA	124693
CONNECTED VA (CODE N)	116047
CONNECTED VA (CODE L)	8646
CONNECTED VA (CODE R)	0
CONNECTED VA (CODE K)	0
PANEL CONNECTED KVA	124.7
PANEL DEMAND KVA	126.9
PANEL DEMAND AMPS	152.6
HIGH Ø AMPS w/ DEMAND	188.1

EXISTING PANEL: H3

VOLTAGE: 480 / 277 3ø 4W CIRCUIT CODE: blank or
BUS: 225A
DATE: 8/16/18 3:41 PM MAINS: L.O. LOCATION: FILES 224
JOB: 018.0405.000 AIC RATING: 14,000 MOUNTING: FLUSH
NO. OF EQUIPMENT: 0
N: NON-CONTINUOUS
L: LONG-CONTINUOUS
R: DEMANDABLE RECEPTACLES
K: KITCHEN

CKT NO	CODE	TRIP	POLE	LOAD DESIGNATION (NOTE)	M	R	L	CONNECTED ØA	ØB	ØC	A	B	C	ØA	ØB	ØC	L	R	M	LOAD DESIGNATION (NOTE)	TRIP	POLE	CODE	CKT NO
1		20	1	(E) DETECTIVES				40	2600		•			1320			4			(E) ATRIUM LIGHTS	20	1		2
3		20	1	(E) CORRIDORS				45		3250	•				–					SPARE	20	1		4
5		20	1	(E) MECH. YARD				4				200		•			–			SPARE	20	1		6
7		20	1	(E) CHIEF. CAP'T.				40	2600		•			–						SPARE	20	1		8
9		20	1	(E) ATRIUM				14		500	•				–					SPARE	20	1		10
11		20	1	SPARE						–		•				–				SPARE	20	1		12
13		20	1	SPARE					–		•			–						SPARE	20	1		14
15		20	1	SPARE						–	•				–					SPARE	20	1		16
17		20	1	SPARE						–		•				–				SPARE	20	1		18
19		20	1	SPARE					–		•			–						SPARE	20	1		20
21		20	1	SPARE						–		•			–					SPARE	20	1		22
23		20	1	SPARE						–	•					–				SPARE	20	1		24
25		20	1	SPARE					–		•			–						SPARE	20	1		26
27		20	1	SPARE						–		•			–					SPARE	20	1		28
29		20	1	SPARE						–	•					–				SPARE	20	1		30
31		20	1	SPARE					–		•			7344					1	(1) CU-1-9	40		N	32
33		20	1	SPARE						–					7344					---			N	34
35		20	1	SPARE						–		•				7344				---			3	N	36
37		20	1	SPARE					–		•			–					1	(1) CU-1-10	40		N	38
39		20	1	SPARE						–		•			–					---			N	40
41		20	1	SPARE						–	•									---			3	N	42

PANEL NOTES: PHASE TOTALS: ØA: 13864 ØB: 11094 ØC: 7544

(1) REMOVE EXISTING (3) 20A, 1P SPARE CIRCUIT BREAKERS AND PROVIDE 40A, 3P CIRCUIT BREAKER. CIRCUIT BREAKER SHALL MATCH EXISTING MANUFACTURER, FRAME, TYPE, AIC RATING, ETC. COMBINE CIRCUITS IN JUNCTION BOX ADEQUATELY SIZED FOR CURRENT TRANFORMER FOR FUTURE TITLE 24 METERING

TOTAL CONNECTED VA	32502
CONNECTED VA (CODE N)	32502
CONNECTED VA (CODE L)	0
CONNECTED VA (CODE R)	0
CONNECTED VA (CODE K)	0
PANEL CONNECTED KVA	32.5
PANEL DEMAND KVA	32.5
PANEL DEMAND AMPS	39.1
HIGH Ø AMPS w/ DEMAND	50.0

EXISTING PANEL: L3

VOLTAGE: 208 / 120 3ø 4W CIRCUIT CODE: blank or
BUS: 225A
DATE: 8/17/18 8:53 AM MAINS: L.O. LOCATION:
JOB: 18.0405 AIC RATING: 10,000 MOUNTING: FLUSH
NO. OF EQUIPMENT: 0
N: NON-CONTINUOUS
L: LONG-CONTINUOUS
R: DEMANDABLE RECEPTACLES
K: KITCHEN

CKT NO	CODE	TRIP	POLE	LOAD DESIGNATION (NOTE)	M	R	L	CONNECTED ØA	ØB	ØC	A	B	C	ØA	ØB	ØC	L	R	M	LOAD DESIGNATION (NOTE)	TRIP	POLE	CODE	CKT NO
1		20	1	(E) PATROL 130				720			•			540						(E) MAINT 149	20	1		2
3		20	1	(E) PATROL 129					1260		•				540					(E) MAINT 149	20	1		4
5		20	1	(E) PATROL 129						540		•				360				(E) BOOKING 137	20	1		6
7		20	1	(E) PATROL 129				540			•			540						(E) BOOKING 137	20	1		8
9		20	1	(E) PATROL 129					540		•				1080					(E) TECH 123	20	1		10
11		20	1	(E) GEN REC'S						720		•				720				(E) TECH 123	20	1		12
13		20	1	(E) GEN REC'S				900			•			1080						(E) TECH 123	20	1		14
15		20	1	(E) CRIME 127					720		•				900					(E) DATA ENTRY 124	20	1		16
17		20	1	(E) INTERVIEWS						720		•				360				(E) RM 133 RECEPT	20	1		18
19		20	1	(E) REPORT				720			•			720						(E) ARMORY	20	1		20
21		20	1	(E) REPORT					720		•				720					(E) ARMORY	20	1		22
23		20	1	(E) REPORT						720		•				–				(E) EXAM/JUV BKG 146	20	1		24
25		20	1	(E) PATROL 135				360			•			200					2	DAMPERS COMPUTER 122	20	1	N	26
27		20	1	(E) PATROL 135					720		•				100				1	FIRE SUPRESSION PANEL	20	1	N	28
29		20	1	(E) PATROL 135						540		•				–				SPARE	20	1		30
31		20	1	(E) PATROL 135				540			•			–						SPARE	20	1		32
33		20	1	(E) PATROL 135					540		•				–					SPARE	20	1		34
35		20	1	(E) GEN REC'S						540		•				–				SPARE	20	1		36
37		20	1	(E) MAINT 149				180			•			3160						(E) PANEL 'L3A'	20	1		38
39		20	1	(E) MAINT 149					540		•				3600					---	20	1		40
41		20	1	(E) BOOKING 137						720		•				2928				---	20	1		42

PANEL NOTES: PHASE TOTALS: ØA: 10200 ØB: 11980 ØC: 8868

TOTAL CONNECTED VA	31048
CONNECTED VA (CODE N)	31048
CONNECTED VA (CODE L)	0
CONNECTED VA (CODE R)	0
CONNECTED VA (CODE K)	0
PANEL CONNECTED KVA	31.0
PANEL DEMAND KVA	31.0
PANEL DEMAND AMPS	86.2
HIGH Ø AMPS w/ DEMAND	99.8

NOTICE

1. ALL EXISTING EQUIPMENT AND FEEDERS TO REMAIN SHOWN LIGHT, NEW SHOWN BOLD

LOAD CALCULATIONS

MAIN SWITCHBOARD 'MSB-1'			
LOAD ADDED			
PANEL 'H2'	=	5	KVA
PANEL 'H3'	=	22	KVA
DP-1 (PANELS 'L6','L3')	=	0.48	KVA
TOTAL	=	27	KVA
/480V ,3ø	=	33	A

LOAD CALCULATIONS

DISTRIBUTION BOARD 'DP-1'			
LOAD ADDED			
PANEL 'L6'	=	0.18	KVA
PANEL 'L3'	=	0.30	KVA
TOTAL	=	0.48	KVA
/208V ,3ø	=	1.33	A

9282.09

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REGISTERED PROFESSIONAL ENGINEER
REX H. REYBURN
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EXP. 3-31-20
ELECTRICAL
STATE OF CALIFORNIA

Corrections

- PLN CHK 08-17-18

UTILITIES BY: JH
TRAFFIC BY: JL
PUBLIC WORKS: JH
CONTROL CERTIFICATION
FILMED
DATE
APPROVED
BY
DESCRIPTION
ORIGINAL
CITY OF LA MESA, CALIFORNIA
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
CITY ENGINEER RCE 60164
DATE
CURRENT COORDINATES
PROP. BY:

Sheet Title: SINGLE LINE DIAGRAM

Project Title: City of La Mesa Police Facility For Construction

Project Architect: Mike Smith

Drawn By: ES/GM/SC

Project Number: 200509.00

Date: 08-17-18

Sheet Number: E5.00