ELECTRICAL LEGEND

(NOTE: ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON DRAWINGS)

DISTRIBUTION & CONTROLS

- ELECTRICAL PANELBOARD (480Y/277 VOLT).
- ELECTRICAL PANELBOARD (208Y/120 VOLT).
- B — ENCLOSED CIRCUIT BREAKER, RATING AND NO OF POLES AS INDICATED.
- NON-FUSED DISCONNECT SWITCH. 30A/3P NEMA 1 UON. 30A = SWITCH RATING, 3P = NO OF POLES, NEMA 1 = ENCLOSURE STYLE.
- FUSED DISCONNECT SWITCH. 30A/3P NEMA 1 UON. FUSE SIZE AS NOTED. 30A = SWITCH RATING, 3P = NO OF POLES, NEMA 1 = ENCLOSURE STYLE.
- C or — CONTACTOR, RATING AND NO OF POLES AS INDICATED.
- PE — PHOTO-ELECTRIC SWITCH. INSTALL WITH SENSOR ELEMENT FACING NORTH, FLUSH MOUNTED WHERE POSSIBLE, UON.
- TS — TIME SWITCH.
- J — JUNCTION BOX.
- M — MOTOR.
- MD — MOTORIZED DAMPER.
- or T — TRANSFORMER, RATING AS INDICATED.
- CURRENT TRANSFORMER, RATING AND NO AS INDICATED.
- DRAW-OUT POWER CIRCUIT BREAKER, RATING AND NO. OF POLES, AS INDICATED.
- THERMAL AND/OR MAGNETIC CIRCUIT BREAKER, RATING AND NO OF POLES AS INDICATED.
- FUSE, RATING AS INDICATED.
- SURGE ARRESTER, RATING AS INDICATED.
- MFM — DIGITAL SOLID STATE MULTI-FUNCTION METER.
- M — UTILITY COMPANY REVENUE METER UON.
- PUSHBUTTON, TYPE AS SPECIFIED ON DRAWING.
- SELECTOR SWITCH.
- E — EQUIPMENT CONNECTION. COORDINATE WITH MANUFACTURERS' REPRESENTATIVE.
- TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSOR SYSTEM.
- PB — PULL BOX, SIZE PER NEC, UON.
- GFI / WP — DUPLEX RECEPTACLE WITH INTERNAL GROUND FAULT PROTECTION, INSTALL 18" AFF UON. ("WP" INDICATES WEATHERPROOF).
- GROUND CONNECTION.

CONDUIT AND WIRE

- CONDUIT RUN CONCEALED IN CEILING, WALL, FLOOR, OR ABOVE SUSPENDED CEILING.
- CONDUIT RUN IN OR BELOW SLAB OR GROUND.
- SWITCH LEG.
- LA-1,3,5 — HOMERUN TO PANEL AND CIRCUIT DESIGNATION. BRANCH CIRCUIT SHALL BE MINIMUM 3#12 AWG EXCLUDING NEUTRAL AND GROUND, 3/4"C. U.O.N. ON DRAWINGS OR SPECIFICATIONS.
- E — EMPTY CONDUIT WITH PULLING LINE, SIZE AS INDICATED.
- CAPPED CONDUIT.

COMMUNICATIONS AND DATA

- TELEPHONE TERMINAL BOARD, 2' X 2' X 3/4" THICK, UON.
- P — TELEPHONE OUTLET. INSTALL 18" AFF UON. 4" SQUARE BOX WITH A SINGLE DEVICE PLASTER RING AND 3/4"C WITH PULLING LINE STUBBED OUT TO ABOVE NEAREST ACCESSIBLE CEILING. P = PAYPHONE WITH OUTLET @ 44" AFF; W = WALL MOUNTED @ 48" AFF.
- DATA OUTLET, INSTALL 18" AFF UON. 4" SQUARE BOX WITH A SINGLE DEVICE PLASTER RING AND 3/4"C WITH PULLING LINE STUBBED OUT TO ABOVE NEAREST ACCESSIBLE CEILING.

NOTE: CONTRACTOR SHALL PROVIDE EMPTY CONDUIT SYSTEM ONLY.

SECURITY SYSTEM

- SEC — SECURITY PANEL MAY BE INTEGRAL WITH FACP.
- DC — DOOR CONTACT
- ES — ELECTRIC DOOR STRIKE
- KP — KEYPAD
- DA — DURESS ALARM SWITCH
- MS — MOTION SENSOR, CEILING MOUNTED, U.O.N.
- GB — GLASS BREAK SENSOR, CEILING MOUNTED, U.O.N.
- CCTV CAMERA
- M — CCTV MONITOR
- CR — CARD READER, PROXIMITY OR SWIPE TYPE AS SPECIFIED.

SITE

- –AP– AERIAL PRIMARY ELECTRIC
- –UP– UNDERGROUND PRIMARY ELECTRIC UTILITY
- –US– UNDERGROUND SECONDARY ELECTRIC UTILITY
- –AT– AERIAL TELEPHONE UTILITY
- –UT– UNDERGOUND TELEPHONE UTILITY
- HA — LIGHTING STANDARD WITH LUMINAIRE. LETTERS DENOTE TYPE.
- UTILITY POLE
- DOWN GUY
- TRANSFORMER POLE
- T — PAD MOUNTED UTILITY SERVICE TRANSFORMER
- P___ — PRECAST MANHOLE OR HANDHOLE AS INDICATED FOR POWER (P) OR COMMUNICATIONS (C) CABLES. SIZE AS NOTED.

ABBREVIATIONS

A	A	AMPERE
	AF	AMP FRAME/AMP FUSE
	AFF	ABOVE FINISHED FLOOR
	AFG	ABOVE FINISHED GRADE
	AHU	AIR HANDLING UNIT
	AIC	AMPERE INTERRUPTING CAPACITY
	ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
	ATS	AUTOMATIC TRANSFER SWITCH
	AT	AMP TRIP
	AWG	AMERICAN WIRE GAUGE
B	BFG	BELOW FINISHED GRADE
	BPS	BOLTED PRESSURE SWITCH
C	C	CONDUIT
	CB	CIRCUIT BREAKER
	CCTV	CLOSED CIRCUIT TELEVISION
	CF	COMPACT FLUORESCENT
	CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
	CKT	CIRCUIT
	CLG	CEILING
	CLK	CLOCK
	COA	CITY OF AUSTIN (AUSTIN PROJECTS)
	CPS	CITY PUBLIC SERVICE (SA PROJECTS)
	CT'S	CURRENT TRANSFORMERS
	CU	CONDENSING UNIT OR COPPER
D	DEMO	DEMOLITION
	DISC SW	DISCONNECT SWITCH
	DGP	DATA GATHERING PANEL
E	EA	EACH
	EC	EMPTY CONDUIT
	EDF	ELECTRIC DRINKING FOUNTAIN
	EWC	ELECTRIC WATER COOLER
	EF	EXHAUST FAN
	ELEC	ELECTRICAL
	EMT	ELECTRICAL METALLIC TUBING
	EPO	EMERGENCY POWER OFF
	EQUIP	EQUIPMENT
	EUD	ELECTRIC UTILITY DEPARTMENT (AUSTIN PROJECTS)
	EWH	ELECTRIC WATER HEATER
	EXIST	EXISTING
	EXP	EXPLOSION PROOF
F	FACP	FIRE ALARM CONTROL PANEL
	FCU	FAN COIL UNIT
	FLA	FULL LOAD AMPS
	FLUOR	FLUORESCENT
G	GEC	GROUNDING ELECTRODE CONDUCTOR
	GEN	GENERATOR OR GENERAL
	GFI/GFCI	GROUND FAULT CIRCUIT INTERRUPTER
	GND	GROUND
	GRS	GALVANIZED RIGID STEEL
H	HID	HIGH INTENSITY DISCHARGE
	HPS	HIGH PRESSURE SODIUM
I	IDS	INTRUSION DETECTION SYSTEM
	IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
	IMC	INTERMEDIATE METAL CONDUIT
	INC	INCANDESCENT
	IPS	INTERRUPTIBLE POWER SUPPLY
	ISCA	SHORT CIRCUIT AVAILABLE AMPS
K	KAIC	THOUSAND AMP INTERRUPTING CAPACITY RMS SYMMETRICAL
	MCM/KCMIL	THOUSAND CIRCULAR MILS
	KVA	THOUSAND VOLT AMPERE
	KW	KILOWATT
L	LRA	LOCKED ROTOR AMPS
	LSI	LONG TIME/SHORT TIME/INSTANTANEOUS TRIP SETTINGS INCLUDED WITH CIRCUIT BREAKER
	LSIG	L.T./S.T./I.T./GROUND FAULT TRIP SETTINGS INCLUDED WITH CIRCUIT BREAKER.
M	MCA	MINIMUM CIRCUIT AMPERES
	MCB	MAIN CIRCUIT BREAKER
	MCC	MOTOR CONTROL CENTER
	MFR	MANUFACTURER
	MH	METAL HALIDE
	MLO	MAIN LUGS ONLY
	MOCP	MAXIMUM OVERCURRENT PROTECTION
	MTD	MOUNTED
	MTG HT	MOUNTING HEIGHT
	MV	MERCURY VAPOR
N	NC	NORMALLY CLOSED
	NEC	NATIONAL ELECTRICAL CODE
	NECA	NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION
	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
	NIC	NOT IN CONTRACT
	NL	NIGHT LIGHT
	NO	NUMBER OR NORMALLY OPEN
	NTS	NOT TO SCALE
O	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
	OFOI	OWNER FURNISHED, OWNER INSTALLED
P	PH	PHASE
	PNL	PANELBOARD
R	RCPT	RECEPTACLE
	REP	REPRESENTATIVE
	REQ'D	REQUIRED
	RLA	RUNNING LOAD AMPERES
	RTU	ROOF TOP UNIT
S	SC	SPLIT BRANCH CIRCUIT INDICATES REFERENCED BRANCH CIRCUIT HAS MORE THAN ONE HOMERUN DESIGNATION SHOWN
	SWBTCO	SOUTHWESTERN BELL TELEPHONE COMPANY (WHERE APPLICABLE)
	SQ FT	SQUARE FEET
T	TEL	TELEPHONE
	TV	TELEVISION
	TYP	TYPICAL
U	UH	UNIT HEATER
	UON	UNLESS OTHERWISE NOTED
	UPS	UNINTERRUPTIBLE POWER SUPPLY
V	V	VOLT
	VA	VOLT AMPERE
	VFD/VSD	VARIABLE FREQUENCY/SPEED DRIVE
W	W	WIRE
	W/	WITH
	W/O	WITHOUT
	WP	WEATHERPROOF
X	XFMR	TRANSFORMER
	XMTR	TRANSMITTER
	XFER SW	TRANSFER SWITCH
Z	%Z	PERCENT IMPEDANCE

GENERAL ELECTRICAL NOTES

(APPLIES TO ALL DRAWINGS.)

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE TO THE PROPER SIDE OF THE DOOR ANY SWITCH, RECEPTACLE OR DEVICE BEING AFFECTED BY ANY CHANGE IN DIRECTION OF DOOR SWINGS AS SHOWN ON THE ARCHITECTURAL FLOOR PLAN.
2. LIGHTING IN MECHANICAL AND ELECTRICAL ROOMS SHALL BE ADJUSTED IN THE FIELD FOLLOWING INSTALLATION OF MECHANICAL AND ELECTRICAL EQUIPMENT TO PROVIDE RELATIVELY UNIFORM LIGHTING AS GENERALLY OUTLINED ON THE DRAWINGS. RECEPTACLES IN MECHANICAL & ELECTRICAL ROOMS, SHALL BE INSTALLED AT 44" AFF, UON.
3. MECHANICAL EQUIPMENT SIZES ARE AS DESIGNED, BREAKERS, CONDUIT, STARTERS, CONDUCTORS, ETC., SHALL BE ADJUSTED TO THE EQUIPMENT SUBMITTED AND APPROVED FOR INSTALLATION ON THIS PROJECT.
4. REMOTE MOUNTED MOTORS SHALL BE PROVIDED WITH RECEPTACLES AND PLUGS OR DISCONNECT SWITCHES TO BE COMPATIBLE WITH THE CONSTRUCTION TYPE AND THE NEC.
5. EACH MOTOR BEING INSTALLED ON THIS CONTRACT SHALL BE PROVIDED WITH THERMAL PROTECTION IN EITHER A MANUAL OR MAGNETIC STARTER. THERMAL ELEMENTS SHALL BE SIZED AND INSTALLED ACCORDING TO THE NAMEPLATE FULL LOAD AMP RATING OF THE MOTOR.
6. KILOWATT (KW) RATINGS FOR EQUIPMENT MOTOR LOADS ARE AS DESIGNED WITH 90% POWER FACTOR RATING ASSUMED (EXCEPT ON THE CHILLER). THE CONTRACTOR SHALL BE RESPONSIBLE FOR INCREASING THE SIZE, AS REQUIRED, OF ALL FEEDERS AND PROTECTIVE DEVICES SERVING ANY ITEMS OF EQUIPMENT SUPPLIED WITH POWER FACTOR RATINGS LESS THAN 90% EFFICIENCY.
7. IN ALL AREAS THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN THE ELECTRICAL AND MECHANICAL TRADES TO PROVIDE CLEARANCE ABOVE CEILING BETWEEN RECESSED LIGHTING FIXTURES AND THERMAL INSULATION OR DUCTWORK IN ACCORDANCE WITH THE NEC, PARAGRAPH 410-66.
8. FLOOR OUTLET LOCATION AS SHOWN ON THE DRAWINGS ARE SCHEMATIC ONLY. EACH OUTLET SHALL BE LOCATED IN THE FLOOR AS DIMENSIONED BY THE ARCHITECT BEFORE CHIPPING OUT EXISTING AND/OR POURING NEW CONCRETE.
9. ALL COUNTERTOP RECEPTACLES WITHIN SIX FEET OF A SINK, SHALL BE GFI TYPE, UON.

GENERAL PLUMBING NOTES

1. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL REVIEW AND FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
3. CONTRACTOR SHALL COORDINATE WITH ALL TRADES DURING CONSTRUCTION.
4. REFER TO ARCHITECTURAL ELEVATION AND SECTIONS PRIOR TO ROUTING OF PIPING.

PLUMBING LEGEND

(NOTE: ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON DWGS)

VALVES

- UNION
- CHECK VALVE
- GATE VALVE
- GATE VALVE IN C.I. VALVE BOX
- PRESSURE GAUGE W/ GAUGE COCK (PI)
- FLANGE CONNECTION
- DROP AT 45° ANGLE
- ELBOW TURNING DOWN
- ELBOW TURNING UP
- CAPPED PIPE
- PIPE SLEEVE
- SLOPE — DIRECTION OF SLOPE (DNWARD)
- BALL VALVE
- VALVE IN VERTICAL

PIPING

- EXISTING SANITARY SEWER
- DOMESTIC COLD WATER (POTABLE)
- DOMESTIC HOT WATER (POTABLE)
- DOMESTIC HOT WATER RETURN (POTABLE)
- G — NATURAL GAS
- DIRECTION OF FLOW

PLUMBING ABBREVIATIONS

ABBREVIATIONS

(SOME PLUMBING ABBREVIATIONS MAY BE DUPLICATED FROM ELECTRICAL ABBREVIATIONS.)

ABBREVIATION	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
ARCH	ARCHITECT
BFF	BELOW FINISHED FLOOR
BLDG	BUILDING
B VA	BALL VALVE
BF	BELOW FLOOR
CAP	CAPACITY
CFH	CUBIC FEET PER HOUR
CH VA	CHECK VALVE
CI	CAST IRON
CO	CLEANOUT
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUATION
CU	COPPER
CW	DOMESTIC COLD WATER (POTABLE)
D	CONDENSATE DRAIN LINE
DIA	DIAMETER
DIV	DIVISION
DN	DOWN
DWGS	DRAWINGS
DI	DUCTILE IRON
ELEC	ELECTRICAL
EXT	EXTERIOR
F	DEGREES FAHRENHEIT
FCO	FLOOR CLEANOUT
FIN	FINISHED
FLEX	FLEXIBLE
FLR	FLOOR
FT	FEET
G	NATURAL GAS
GALV	GALVANIZED
GA	GAUGE
GPM	GALLONS PER MINUTE
GT VA	GATE VALVE
HR	HOUR
IN	INCHES
IE	INVERT ELEVATION
LB	POUNDS
MAX	MAXIMUM
MFR	MANUFACTURER
MIN	MINIMUM
MTD	MOUNTED
MTR	MOTOR
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTSIDE AIR
OS&Y	OUTSIDE STEM & YOKE
OC	ON CENTERS
OH	OVERHEAD
PD	PRESSURE DROP
PH	PHASE
PLBG	PLUMBING
PR VA	PRESSURE REDUCING VALVE
PSIG	POUNDS PER SQUARE INCH GAUGE
RED	REDUCER
RE:	REFERENCE
RH	RELATIVE HUMIDITY
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
SAN	SOIL & WASTE (ABOVE GRADE)
SCH	SCHEDULE
SD	STORM DRAIN
SQ FT	SQUARE FEET
STL	STEEL
STRUC	STRUCTURAL
TOT	TOTAL
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VTR	VENT THROUGH ROOF
WCO	WALL CLEANOUT
W/	WITH

LIGHTING FIXTURE SCHEDULE

NOTE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM COMPATIBILITY BETWEEN THE CEILING TYPE, AS DEFINED ON THE ARCHITECTURAL ROOM FINISH SCHEDULE, AND THE LIGHT FIXTURE TRIM AS DEFINED ON THE FIXTURE SCHEDULE. NO CHANGES OR DEVIATIONS SHALL BE MADE FROM THE CONTRACT DOCUMENTS, HOWEVER, WITHOUT WRITTEN APPROVAL OF THE ENGINEER/ARCHITECT.

TYPE	MANUFACTURER AND MODEL NUMBER	LAMPS	VA	VOLTAGE	DESCRIPTION	REMARKS
HA	SPAULDING #PF II-SQ-PM-M1000-III-480-RPA-DBZ ON LEXINGTON #3808-6010BT4-DBZ, POLE HUBBELL #MSV-A1000H-VP5-1 ON HAPCO #51-262 POLE	1-M1000 C/U	1250	480	METAL HALIDE CUT-OFF LUMINAIRE WITH VERTICAL LAMP TYPE III DISTRIBUTION. MOUNT ON 40'-0" ROUND TAPERED ALUMINUM POLE. PROVIDE POLE BASE FUSING.	PROVIDE FOR COMMUNICATIONS ENCLOSURE ON SPECIFIED POLES. VERIFY WITH RESIDENT ENGINEER.
HB	SPAULDING #PF II-SQ-PM-M1000-II-480-RPA-DBZ ON LEXINGTON #3808-6010BT4-DBZ, POLE HUBBELL #MSV-A1000H-VT5-1 ON HAPCO #51-262 POLE	4-M1000 C/U	5000	480	METAL HALIDE CUT-OFF LUMINAIRE WITH VERTICAL LAMP TYPE II DISTRIBUTION. MOUNT ON 40'-0" ROUND TAPERED ALUMINUM POLE. PROVIDE POLE BASE FUSING. (4 AT 90 DEG.)	–
HC	SPAULDING #PF II-SQ-PM-M1000-III-480-RPA-DBZ ON LEXINGTON #3808-6010BT4-DBZ, POLE HUBBELL #MSV-A1000H-VP5, ON HAPCO #51-262 POLE	2-M1000 C/U	2500	480	METAL HALIDE CUT-OFF LUMINAIRE WITH VERTICAL LAMP TYPE III DISTRIBUTION. MOUNT ON 40'-0" ROUND TAPERED ALUMINUM POLE. PROVIDE POLE BASE FUSING. (2 AT 180 DEG.)	–
HD	LEXINGTON #1908-4070S14 HAPCO #51-007	N/A	–	N/A	20'-0" ROUND TAPERED ALUMINUM POLE.	POLE TO BE USED FOR SECURITY CCTV CAMERA.
–	–	–	–	–	–	–
–	–	–	–	–	–	–
–	–	–	–	–	–	–
–	–	–	–	–	–	–

LIGHTING FIXTURE SCHEDULE NOTES:

1. EQUIVALENT MANUFACTURERS, ACCEPTABLE TO PROVIDE LIGHTING FIXTURES AND POLES SHALL BE KIM OR GARDCO.

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REGISTERED ARCHITECT DANIEL T. MUZQUIZ 8673 STATE OF TEXAS

Revisions | Date

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REGISTERED ARCHITECT DANIEL T. MUZQUIZ 8673 STATE OF TEXAS

CONCUR: CHIEF BIO-MED | APPROVED: SVC. CHIEF
CONCUR: M. & R. | APPROVED: SVC. CHIEF
CONCUR: OPER. | APPROVED: SVC. CHIEF
CONCUR: SAFETY | APPROVED: CHIEF OF STAFF

Drawing Title: PLUMBING AND ELECTRICAL LEGEND AND LIGHTING FIXTURE SCHEDULE
Approved: Chief Of Engineering
Approved: Associate Director

Project Title: VA PARKING EXPANSION
Building Number: 1 | Checked: DTM | Drawn:
Location: Audie L. Murphy Hospital San Antonio, Texas

Date: 1-24-01
Project No.: 00-867
DRAWING NO.: PE-1
Dwg. 13 of 18

Office of Facilities — Department of Veterans Affairs

FILENAME: SCALEFACTOR : XREFS :